

ANNUAL
EVALUATION
REPORT

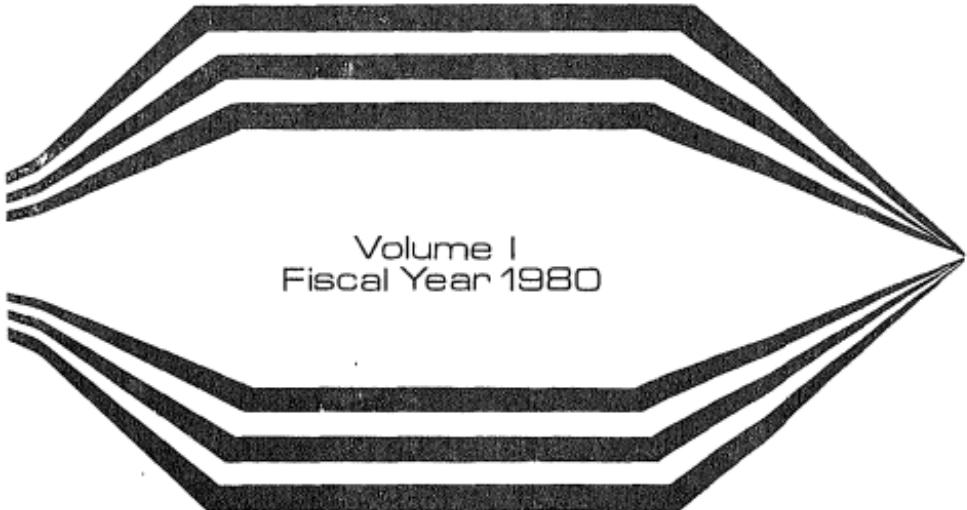
Volume I
Fiscal Year 1980

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U.S. DEPARTMENT OF EDUCATION
Office of Evaluation and Program Management

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Foreword

This is the 10th annual report to the Congress on federally funded education programs. These programs were transferred in May 1980 to the U.S. Department of Education from the U.S. Office of Education. This year's report, like its predecessors, responds to several congressional mandates. The original directive for the Annual Evaluation Report is contained in Section 417 (a) of the General Education Provisions Act (GEPA). The Report is to evaluate the effectiveness of programs in achieving their legislated purposes and include recommendations for achieving greater effectiveness. Section 1246 of the Education Amendments of 1978 (Public Law 95-561) modified the original GEPA mandate to require that reporting on program effectiveness also indicate compliance with provisions of the law on maintenance of non-Federal expenditures where such provisions exist. A third requirement became law early in fiscal year (FY) 1981 as part of the Education Amendments of 1980 (Public Law 96-374). Section 1305 further amends the GEPA mandate to require tabulations of available data to indicate program and project impact by the sex, race, and age of beneficiaries.

In addition to meeting these mandated requirements, this report describes the role of evaluation in improving education programs and changes in evaluation activities in the new Department of Education (ED). It also explains the evaluation mission in ED.

Users of the previous, single-volume editions of this report will quickly note that this year's version has been prepared and packaged differently. Past Office of Education (OE) reports were published in one volume. They contained overviews of evaluation activities with detailed program material comprising the bulk of the volume. The FY 1980 report has been divided into two volumes. The new, condensed volume I is intended for general distribution. Detailed program-by-program summaries are now contained in a second volume which will be distributed to appropriate congressional committees and to other interested readers upon request.

Several reasons underlie this change in format. The evaluation report is read by a diverse audience with differing needs and uses for evaluation information. Congressmen, State and local officials, the education community, parents, students, and concerned citizens all have a general interest in the effectiveness of Federal education programs. Specific information needs, however, differ widely and detailed reporting is critical only in some instances. The two-volume report will enable ED to respond to varying information requirements, depending upon the needs of interested parties. The Department believes that the two-volume report will be a more flexible, efficient, and cost-effective way to disseminate evaluation information than the large, single volume.

Because volume I is intended to provide a broad overview of ED evaluation activities, additional explanatory material has been included. This first volume contains information on the Department's innovative information gathering and evaluative techniques, and on its management initiatives to better utilize evaluation findings. Highlights of new evaluation findings and the uses of ED evaluations can be found in chapter 3. A general perspective on major ED program evaluation activities is contained in chapter 2. Program areas covered include elementary and secondary education, postsecondary education, and

diverse special category programs. As previously mentioned, detailed information on individual program evaluations which were in past annual evaluation reports has been updated for FY 1980 and appears as volume II. All programs that were formerly the responsibility of the Office of Education are covered in this year's report. The FY 1981 report, representing the Department's first full fiscal year of operation, will contain evaluation reports on these programs as well as comparable reports on programs transferred to the Department from other Federal agencies as a result of the ED Organization Act.

I would like to acknowledge the contributions of several individuals to this year's Report. Dr. Thomas Uhlman translated the idea of a first volume into reality by structuring and writing much of it. The Evaluation Coordination Staff, in particular Mr. Edward Glassman, Ms. Jeane Onufry, and Ms. Elaine Green, helped pull together and organize diverse evaluation materials from a variety of sources. Evaluation division directors and their staffs contributed specific program chapters and overview materials. Finally, Ms. Diana Carpenter's tireless typing was essential to the successful completion of this report.

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Chapter I

Evaluation in the Department of Education

On May 4, 1980, the Department of Education (ED) became the 13th Cabinet-level Department in the U.S. Government. Today, the Department's numerous programs focus on two primary goals. The first is to assure all students, regardless of age, background, or native ability, equal access to the best possible education. The second goal is to help improve the quality of education for every student.

One critical component of accountability in Federal education activities in the Office of Education (OE) and now in ED is evaluation. The legislation establishing the Department specifically cites improvements in evaluation as a purpose for its creation. Broadly defined, evaluations are objective assessments of program and management performance. Specific approaches adopted, costs incurred, and study objectives vary, but all ED evaluation activities share the common purpose of trying to ensure that Federal education monies are being efficiently spent on programs that are successfully meeting their congressional mandates.

U.S. OFFICE OF EDUCATION

Education evaluation requirements were first mandated by the Congress in 1965 under Title I of the Elementary and Secondary Education Act. This legislation included a provision that school district grantees evaluate the effectiveness of their programs. Other OE programs soon contained evaluation requirements as well. The FY 1970 budget was the first to contain a specific line-item for evaluation funds. That year OE also centralized evaluation activities in the newly established Office of Program Planning and Evaluation, later renamed the Office of Evaluation and Dissemination. This office assumed the lead in directing an increased number of national education evaluations. The staff designed studies, selected contractors to do fieldwork and analyses, monitored contractor performance, and reported on study findings and recommendations. From 1970-79, OPPE spent an average of \$18.4 million a year on evaluation activities.

Not all education evaluation activity took place in the Office of Evaluation and Dissemination or its predecessor offices. The Bureau of Education for the Handicapped sponsored studies on the implementation of the Education for All Handicapped Children Act; the Bureau of Student Financial Assistance conducted quality control studies of the Basic Educational Opportunity Grant program; and the National Institute of Education and the Follow Through program supported evaluation research and some program evaluations.

U.S. DEPARTMENT OF EDUCATION .

During the 1970's, evaluation became a critical component of federally sponsored education programs, and evaluation is retaining its prominent position in the Department of Education as the 1980's unfold. ED evaluation activities are the responsibility of the Office of Management under the Deputy Assistant Secretary for Evaluation and Program Management. Several reasons prompted this organizational response to the new Department's evaluation mission. Organizational separation between the offices in charge of program operations and the assessment of those programs were deemed essential to maintain the

independence and objectivity of program reviews. Second, the placement of evaluation activities within the Office of Management reflects a departmental commitment to translate evaluation findings into management improvements whenever possible. The Office of Evaluation and Program Management (OEPM) has undertaken a series of initiatives that bring together evaluation, policy, and budget staffs to explore the implications of program evaluations on all aspects of current departmental activities and to incorporate evaluation results into future planning. Finally, a number of management evaluation efforts, also highlighted in this report, gather information on program operations that can be used in conjunction with the more elaborate program evaluation studies. Placing management and program evaluation activities within the same office allows the Department to draw more effectively upon a variety of evaluation techniques to meet specific information needs.

Because of their complexity and data collection requirements, impact and process evaluations (definitions and discussion follow) are conducted by outside research organizations. These studies usually assess the national impact of programs and/or the manner in which they have been implemented. They are administered by three divisions in the Office of Evaluation and Program Management: the Elementary and Secondary Programs Division; the Postsecondary Programs Division; and the Occupational, Handicapped, and Developmental Programs Division.

The functions of these program evaluation divisions include:

- o Reviewing the state of knowledge about programs and identifying program information needs.
- o Preparing study designs and contractor selection criteria.
- o Directing the progress of contracted work with particular attention to the implementation of the original study design and technical direction to guide changes in design (this involves the selection and development of measuring instruments, sampling, data collection, and analysis).
- o Preparing appropriate executive summaries to communicate findings to ED policymakers, the Congress, and the public.

These three divisions constitute the Office of Program Evaluation, one of two major offices reporting to the Deputy Assistant Secretary for Evaluation and Program Management.

The counterpart office under the same Deputy is the Office of Management Evaluation. Several critical Department management functions are also housed within this office which includes the Divisions of Program Assessment, Quality Assurance, Organizational Development, Management Analysis, and Education Data Control. Among their responsibilities are:¹

- o management analyses
- o quality assurance studies
- o needs analyses for office automation

- o work measurement reporting
- o short-term management assessments of how well programs are being delivered to recipients
- o organizational development planning

ED EVALUATION ACTIVITIES

The concept of evaluation has been broadened considerably in the Department of Education. New techniques and approaches have been developed to increase the capabilities of Department policymakers and program officials to meet program information needs under budget and time constraints. Before explaining the new techniques or the old, one must review how the Department goes about establishing an evaluation agenda. The evaluation planning process structures the agenda and largely determines the choice of evaluation techniques to be used.

Evaluation Planning

Evaluation information is necessary in order to answer one or more critical questions about education programs. These questions remain at the heart of the evaluation planning process:

- o Who is served by the program and who needs service?
- o What are the services, how well are they delivered, and what do they cost?
- o What are the effects of services on recipients?
- o What are the costs and benefits of alternatives?
- o What improvements should be made in the management and administration of the programs?
- o What program practices, projects, or products are effective in achieving program objectives?

Every education program would profit greatly with answers to questions. Budgetary constraints, however, have meant that programs could only be evaluated on a selective basis. Because of competing program demands, evaluation planning began in the Office of Education.

In OE, the strategy originally used to identify program evaluation needs was for the central evaluation staff in the Office of Program Evaluation to request annually formal recommendations for evaluation projects from program managers and then develop a recommended list of projects to be undertaken in the following year. This list was submitted to the Assistant Secretary for Planning and Evaluation (ASPE) in the former Department of Health, Education, and Welfare (HEW) for approval.

In January 1979, OE initiated a new procedure to develop the annual evaluation plan. The purpose of the new procedure was to exert more control over evaluation planning and broaden the review process. An Evaluation Planning Committee was established consisting of several OE and HEW policy officials. This group prepared a comprehensive plan for ASPE's approval. The expansion of OE's evaluation planning and review process was generally regarded as a useful development in that it helped focus OE planning on such critical factors as program reauthorization and specific congressional or departmental concerns.

One problem that any evaluation group must solve is how to ensure the timeliness of their evaluation findings for decisionmakers. A common criticism of most Federal evaluation offices has been that their study findings lose relevance to Administration and congressional policy officials because results are reported too late to be fully used in reauthorizing programs or deciding on budget requests or appropriation levels. In response to this problem, the Office of Evaluation and Program Management has developed an evaluation planning model. Its primary purpose is to help ED focus on the type and timing of program and policy questions to be addressed by evaluation staff, so as to meet the information needs of executive branch and congressional policy officials. The approach adopted for the model is substantially more systematic and comprehensive than previous efforts. In addition to helping ensure that appropriate information from management and program evaluations is available, the planning model can also be used for planning, research, and statistical studies conducted by other ED offices.

The context for the evaluation planning model is the "life cycle," as authorized in legislation, of individual Federal education programs or groups of programs under consideration. Life cycles begin approximately 2 years before a given program is to be reauthorized and continue 'til the following reauthorization. Accordingly, a typical life cycle is 5 to 7 years, depending upon the length of reauthorization.

There are two reasons why the life cycle and, consequently, activities under the evaluation planning model start even earlier than the beginning of a reauthorization period. One is the importance of specifying in advance the information needs pertaining to future legislation, management, and budget issues and identifying the sources for each type of information. This specification must be done far enough in advance for each information-producing activity to be planned, carried out, analyzed, and reported in a timely fashion. The second reason is to foster early coordination of information-producing activities, thereby minimizing gaps or duplication of effort and to ensure that requests to the field for data are not excessive. The evaluation planning model also recognizes the need for flexibility during the program's life cycle as the information agenda changes and corresponding shifts are made in the evaluation plan, so that management and program reports will be timely, relevant, and of the greatest possible use. In addition, there are a variety of uses for evaluation findings aside from reauthorization efforts. For example, Department managers use evaluations to improve grant-making and other processing operations while the budget process demands information from evaluations for Department, OMB, and congressional officials. As information needs change during a program's life cycle, revisions in the application of the evaluation planning model to particular program areas can be made. Overall, the planning model serves as the guide for selecting among various evaluation techniques to fulfill the information agenda.

Traditional Evaluation Activities

Evaluation information on national programs is essential for responsible management. Without it, program effectiveness would remain unknown or anecdotal and improvements in service delivery would be hampered. A variety of information-gathering techniques or approaches are required in order to meet specific management needs. Some can be categorized as traditional in that they have been developed by evaluators over a relatively long period (15-20 years) and are viewed by many professionals as the "standard" way of gathering program information. These activities are called process or impact evaluations.

Process evaluations include studies of the activities, operations, organization, and other aspects of a program. They may be designed to examine reported shortcomings in program operations or merely to monitor program implementation. Less elaborate varieties may involve short site visits and management case studies. The more elaborate approaches can involve careful measurement of how many individuals receive services or how institutions comply with Federal mandates. The main focus of such activity is understanding the delivery of program services and adherence to standards, rather than understanding or estimating effects of service.

Impact evaluations of education programs attempt to estimate as accurately as possible the direct effects of a program on its main target group, whether children, adults, or institutions. These studies are more difficult when there are multiple target groups and when many program effects are indirect. If costs and effects of program variations are estimated, the activity may involve cost-benefit analyses.

During FY 1980, 13 impact evaluations were in progress. The studies were conducted by highly qualified, professional research firms or universities according to explicit requirements detailed by the Department's evaluation staff. It may be asked why Federal employees do not carry out these projects rather than work through an outside contractor. The answer is that program information needs (both in terms of the number of programs that are evaluated and the complexity of each evaluation) and the consequent collection of data in the field far outstrip the relatively limited evaluation staff resources within the Department.

Although they do not actually lead a research team in the field, departmental evaluation staff provide technical direction and control from the beginning to the conclusion of a process or impact evaluation. Initially, a staff member is designated as the project monitor and develops the specifications for the work to be performed by a contractor. Once the contractor is selected through a competitive bid process and the evaluation is initiated, the project monitor maintains close contact with the contractor throughout each phase of the study. The basic purposes for this monitoring function are: (1) to make sure that the study is conducted in accordance with the original design or approved changes; (2) to advise the contractor when problems arise which may jeopardize the validity of the study; and (3) to ensure that the study, as executed, answers the appropriate questions. At the completion of the contract, the monitor takes responsibility for the production of an executive summary of the findings, and ensures that the contractor's report is reviewed by Department officials and is ultimately transmitted to the appropriate audiences.

The greatest strength of impact and process evaluations is that they provide the most comprehensive view of program operations or accomplishments that the Department can obtain. On the other hand, two drawbacks may make them inappropriate in certain situations. Because of the elaborate nature of these studies, they are more expensive than other options, and cost is an even more critical factor today when evaluation budgets have generally been reduced. Time is another consideration that can work against impact and process evaluations. They may take several years to complete, and information needs are often more immediate because many program and budgetary decisions cannot be deferred.

These shortcomings have led evaluation officials in the Department to search for other means to obtain useful evaluation information more quickly and at less cost. The result is a series of evaluation/management innovations that supplement impact and process evaluation capabilities within OEPM.

New Evaluation and Management Activities

Additional program information is being obtained through four evaluation techniques new to the Department of Education. Evaluability assessments and the program objectives system focus on developing a broad consensus regarding long-range, measurable program goals and objectives. Program management reviews and service delivery assessments are low-cost evaluation tools which Department staff also use to obtain program information. In addition, management evaluation techniques are used to review and analyze the effectiveness and efficiency of ED's management practices, systems, organization, and procedures, and to prescribe improvements where appropriate. These techniques include: management analyses; quality assurance studies; and organizational development activities.

1. Evaluability Assessment (EA)

Evaluability assessment is a technique designed to support the evaluation process by first ensuring that a program has a solid management foundation. EA's purposes are to determine the extent to which a program is ready for evaluation; what changes might be needed to make the program more manageable and accountable; and how an evaluation of the program might be most usefully conducted. A fully successful evaluability assessment results in: (1) clearly specified and agreed upon program objectives and activities; (2) an explicit statement of the assumptions that underlie the program; (3) a list of program performance indicators that are agreed upon by those responsible for the program; and (4) a detailed plan for

- o What are management's program objectives and expectations?
- o What resources, activities, objectives, and assumptions make up management's intended program?
- o What, in the view of policymakers (executive and legislative), is the program expected to accomplish, what are acceptable indicators of performance, and how will program information be applied to them?
- o What are the likely uses of information on program performance at each management level? What range of actions might management consider as a result of various findings?

On the basis of responses to these questions and a review of relevant documents (e.g., the authorizing legislation and legislative history), the assessment team develops three types of descriptive charts or models of the program. A logic model is drafted to represent the intended logic of the program (e.g., if event A occurs, then it is assumed that event B will occur). A second set of models, known as function models, trace the program's processes, including such events as flows of activities, people, money, and information. The third model deals with measurement of progress toward program objectives. It identifies measures which could be taken at various points in the process to indicate program performance. Since all these models are based on interviews with Federal officials only, they represent a description of the intended program.

The assessment team then visits a limited sample of projects to obtain information about the actual program as it operates in the field. A second set of models is developed to represent program reality. Questions addressed during and after the field visits include:

- o What are the program inputs, activities, and outcomes based on a review of actual operations at a sample of project sites?
- o What measurements and comparisons are feasible, given existing data systems?
- o What data are obtainable on program performance? Are there data sources for management's agreed-upon measures of progress?

All information gathering and modeling at the policy, management, and field operations levels lay the groundwork for the analytical stage of the assessment. Questions asked by the team during the analysis of program evaluability include:

- o Is program management's description well-defined?
- o Is management's description acceptable to policymakers?
- o Is management's description a sound representation of the program in the field?
- o Are management's expectations plausible -- that is, do they appear likely to be accomplished?
- o What portion of the intended program is ready for useful evaluation?
- o What management options can be suggested to improve program performance?

Outputs of an evaluability assessment generally include: (1) an agreed-upon program description including objectives, activities, and anticipated outcomes; (2) possible measures of program performance; and (3) suggestions for improving performance and measuring accomplishments.

Like full-scale impact and process evaluations, EA's are conducted by an outside team of researchers subject to close supervision by a Department project

monitor. Evaluability assessments differ significantly in that they are intended to produce results relatively quickly (6 months) and inexpensively (an average cost of \$65,000). Their greatest benefit, however, is the savings of time and money that might otherwise be expended initially on an unsuccessful impact or process evaluation -- that is, the resources that might be used to evaluate a program that instead is shown by an EA to lack agreed-upon, measurable objectives.

Twelve EA studies of ED programs were initiated in FY 1979 and FY 1980. At of the end of FY 1980, work was still in process on two of the assessments (the Strengthening Developing Institutions program and the Women's Educational Equity program); two others had been terminated before completion (the Vocational Education program and National Center for Education Statistics);² eight of the assessments had been completed. These eight studies covered the following programs: Bilingual Education; Career Education; Cooperative Education; Early Childhood Education for the Handicapped; Follow Through; Institute for Museum Studies (General Operating Support); Language Training and Area Studies; and Vocational Rehabilitation. At least four new assessments will be undertaken in FY 1981.

2. The Program Objectives System

The Office of Evaluation and Program Management is currently developing a system that is less intensive, time consuming, and expensive than evaluability assessment but, like EA's, is intended to generate measurable program objectives and indicators of achievement. The process will place primary responsibility on program managers for: (1) identifying key objectives; (2) developing measures or indicators which can chart progress; and (3) preparing annual progress reports for departmental and congressional review. OEPM will be responsible for: installing and managing the system; defining terms and setting criteria for objectives; providing technical assistance and necessary support to program managers; coordinating review of objectives and indicators; and advising on the general quality and appropriateness of final products.

It is hoped that this program objective-setting effort will produce objectives and indicators for programs just prior to ED's internal budgeting cycle so that the objectives are useful in the budget review and policy activities of the Department. In addition, the Department will be able to improve significantly its efforts to meet the mandate of Section 417 of the General Education Provisions Act requiring development of specific objectives and performance indicators for all ED programs.

The objectives and indicators developed through this process will be transmitted to the Congress in the *Annual Evaluation Report*. It is anticipated that the transmission of these individual program objectives and measures will assist the Congress and the Department in agreeing upon legislative and administrative mandates for program operations. Some differences will naturally emerge in this dialogue, but the existence of the initial objectives should be helpful in clarifying and resolving those differences.

Programs which are especially complex or controversial will continue to have objectives developed through the more analytical, intensive process of evaluability assessment. The program objectives system should be extremely cost-efficient because, once developed, the entire process can be operated

exclusively by Department management and program staff. Through the use of both methods, the Department hopes to improve the management of its services and programs.

3. Program Management Reviews (PMR)

This evaluative technique is also being developed and refined by the Office of Evaluation and Program Management. It is a study designed to synthesize existing program information in a short period of time and to supplement that information with independent, short-term assessments covering important knowledge gaps about the operations of the program. The resulting report gives the Secretary and other top managers a complete but succinct picture of a program including its history, legislative goals and objectives, resources, administrative and management operations, field perceptions, effectiveness, issues, and problems.

Program management reviews will be particularly valuable: when programs are facing reauthorization without sufficient data on certain aspects of their operations; when controversial issues require difficult management decisions; and when top management changes are made. While PMR's are not designed to develop quick solutions for program problems, they can be used as diagnostic tools to identify where administrative, policy, or legislative changes should be made.

A PMR will be directed by OEPM staff with the assistance of other program and staff offices within ED. Staff with expertise in management and program analysis, work measurement, organizational behavior, quality control techniques, and other fields make up a PMR team.

The specific purpose, scope, level of detail, and length of each PMR will be defined by the Office of Evaluation and Program Management in conjunction with top management for the program. Because each PMR will require a significant level of resources, no more than three or four such studies will be undertaken in a fiscal year. Use of the PMR technique will be reserved for high priority needs and interests of the Secretary and Assistant Secretaries.

4. Service Delivery Assessments (SDA)

These short-term, current assessments of ED programs and program-related issues are conducted for the immediate use of the Secretary and Under Secretary. The 3- to 5-month studies collect opinions and suggestions from persons who directly receive or provide services under ED programs in order to gain an understanding of how programs are perceived across the country. An SDA gauges: how successful ED programs are perceived to be at the State and local levels in meeting the needs of students, teachers, parents, and administrators; what problems exist as programs are being implemented; and what improvements are identified by those directly affected by the Federal programs.

It is important to understand that SDA's are limited activities that do not correspond to traditional evaluation studies, audits, compliance reviews, or monitoring activities. While they often employ similar methods, SDA's are more analogous to in-depth analytical reporting which uses open-ended discussions with people in local settings. The knowledge gathered is generally subjective and

qualitative in nature. Because of these characteristics, SDA findings are not intended for general distribution but rather for use as one of many program information sources available to the Secretary and other decisionmakers.

The reasons for undertaking an individual SDA vary with each study. Some frequent reasons include: suspected operational problems; significant changes planned or underway; expiring or proposed legislation; plans for a major initiative; programs or issues the Secretary wants to explore. The SDA teams seek especially to identify operational improvements which the Secretary and program officials can make without the need for legislative, regulatory, or budgetary changes. In this fashion, the SDA findings and recommendations can be implemented immediately.

In the Department of Education, SDA's will be conducted under the overall supervision of OEPM with regional staff providing onsite support necessary to conduct the studies. It is hoped that State and local education staff will eventually participate with ED regional staff in planning and executing these service delivery assessments.

5. Management Analyses

Management analyses are studies intended to improve quality control and productivity in Department management and program operations. Improving overall productivity is viewed as a crucial responsibility for top-level career management in the Department. Recently, management analyses have led to recommendations intended to increase efficiency and reduce costs in three areas: travel; personnel actions; and student financial aid.

The emphasis in all three areas is on making accountability and quality control integral parts of these processing and delivery systems. Scholarship aid, travel documents, or personnel papers do not result from a series of discrete managerial tasks but rather are produced by an interdependent system where efficiency or inefficiency at any one point affects the entire process. This comprehensive perspective fosters accountability by allowing every individual to share responsibility for the efficient delivery of services.

Management analysis also entails the study of the impact and applicability of technology, particularly in an office setting. Research and development efforts in office automation attempt to avoid the common pitfall of assuming that new equipment by itself will increase productivity and efficiency. New equipment may merely hide existing administrative problems. Therefore, management analysts first examine existing office operations and endeavor to make these as productive as possible. The analysts may subsequently recommend that new equipment be added, but only based on sound productivity goals and a thorough understanding of existing office capabilities.

6. Quality Assurance Studies

Quality assurance studies are intended to assess the accuracy and reliability of program data and information used for management decisions. Multidisciplinary teams composed of statisticians, economists, systems analysts, management analysts, and attorneys use a variety of evaluation and statistical techniques³ to assess departmental support systems and programs. Three quality assurance

studies currently in progress focus on: grantee monitoring; the process of evaluating discretionary grant applications; and developing consistent program descriptions.

Previous studies conducted by the Office of Education revealed the absence of an agency policy with respect to grantee monitoring. These studies indicated that there were no minimum standards underlying monitoring efforts nor any mechanism in place to encourage consistency in monitoring. These studies contained a variety of recommendations to resolve these problems. The Office of Evaluation and Program Management's Quality Assurance Division is currently using these recommendations as the basis for the development of directives, manuals, and other policy documents related to the monitoring of State formula and discretionary grant programs in ED.

A quality assurance survey is also underway of all discretionary grant programs in the Department (approximately 80) that use nongovernment experts to review grant applications. The survey and subsequent data analyses are intended to gather baseline information on existing procedures and then suggest ways for improving the system's shortcomings. The survey explores topics such as: 1) the review process stage at which outside/inside reviewers are used; 2) the use and consistency of evaluation standards that reviewers follow; 3) the legislative requirements for using grant application reviewers; and 4) the alternatives to using nongovernment reviewers.

The Office of Education did not have an automated system for providing consistent and reliable responses to frequently asked questions about education programs. To remedy this situation, its quality assurance staff is developing a Program Profile System (PPS), a computerized information retrieval system containing common key descriptors on each Department program. PPS is being designed to generate indices of programs by descriptors as well as to generate a listing or profile of all descriptors for each program. PPS will be developed in phases: Phase I will profile programs by the Catalogue of Federal Domestic Assistance number on 18 descriptors; Phase II will profile subgrant-making activities and contract programs; and Phase III will add new descriptors for each program.

7. Organizational Development Activities

Organizational development activities include the creation of an administrative communications system, and work measurement and organizational effectiveness studies. The administrative communications system is departmentwide. It is used for coordinating the development and distribution of internal management directives, Secretary-level circulars, administrative announcements, and the ED organization manual. The purposes of the system are to: 1) assure that affected parties have ample opportunity to participate in formulating permanent administrative policies and procedures; 2) provide complete, concise, current, and authoritative information to agency personnel; 3) produce easy-to-read and understandable documents; 4) group in a single source for each specialized audience information on specific subjects; and 5) make information easy to locate.

Work measurement studies collect current data for a departmental workload reporting system that statistically compares personnel resource needs on the basis of major output indicators. Within each general category of programs

(State plan, formula, or discretionary programs), the following major indicators are computed for each program: number of applications received; number of grants made; number of dollars appropriated; and number of onsite reviews conducted each year. The system will assist top management in assessing workload trends and identifying potential areas for redistribution of positions. Other work measurement studies can be integrated with management improvement efforts in such areas as objective-setting, quality assurance, and system design.

Organizational effectiveness studies assist individuals and ED units in working more effectively and productively. Projects are designed to examine such issues as diagnosing organizational problems, clarifying communications, establishing goals, working with conflict, and improving meetings, decisionmaking, and interpersonal relations.

The services of the organizational development staff include: 1) leadership transition assistance to aid new leaders and key management staff to take command quickly and work effectively with the bureaucracy; 2) organizational diagnosis studies and feedback sessions; 3) consulting on agency trouble spots; and 4) designing and conducting team-building activities for leaders, managers, and their staffs.

Developing a Systematic Approach to Evaluation

Having developed an evaluation planning model, continued the conduct of traditional process and impact evaluations, and instituted new, shorter term evaluation techniques, the Office of Evaluation and Program Management has reshaped the evaluation function and operation in the Department. The evaluation planning model helps predict information needs at given points during a program's life cycle. A wider range of evaluation techniques can now be systematically selected with specific program data and information requirements in mind. Finally, this approach can lend itself to better planning for information collection activities other than evaluation studies; e.g., research, statistical surveys, and planning studies.

As an example of how these evaluation techniques and the planning model can assist ED officials in obtaining timely and useful evaluation findings, take a hypothetical, newly authorized postsecondary student assistance program which might require the following types of information during its life cycle.

- o clarification of program objectives and performance measures through either the program objective-setting process or an evaluability assessment; timing: planned shortly before final authorization and executed immediately after the law is enacted.
- o design of a delivery system for student assistance using management analysis, organizational development, and quality control expertise; original inclusion of a quality control system giving feedback information to managers on how well the program is working is especially critical at this point; timing: planned before final authorization and executed shortly after enactment of the law; the delivery system is dependent upon perceived program objectives and should incorporate performance measures as part of its management information system.

- o special information will be needed for annual budget reviews or upon request of Department officials; to meet those demands, shorter term evaluation tools such as service delivery assessments, program management reviews, organizational studies, work measurement reviews, and management analyses can be planned during the program's life cycle; timing: usually after the program has been in operation for 1 to 2 years.
- o major issues surrounding a program may require larger evaluation projects, such as those dealing with effects of Federal funds on State and local education agencies, assessment of the national strategy used for implementing a specific program, or the national impact of a program on the educational achievement of children; timing: depends upon when the information is needed -- for example, a national impact study whose results are needed for the next reauthorization cycle should report its findings approximately 2 years before reauthorization so that Department officials will have the findings as they draft proposed legislation. This, in turn, means that the study should begin 3 to 5 years before the reporting date so as to have enough time to collect and analyze the data.

An illustration of a typical evaluation planning model that might be developed for such a newly authorized program is shown on the following page.

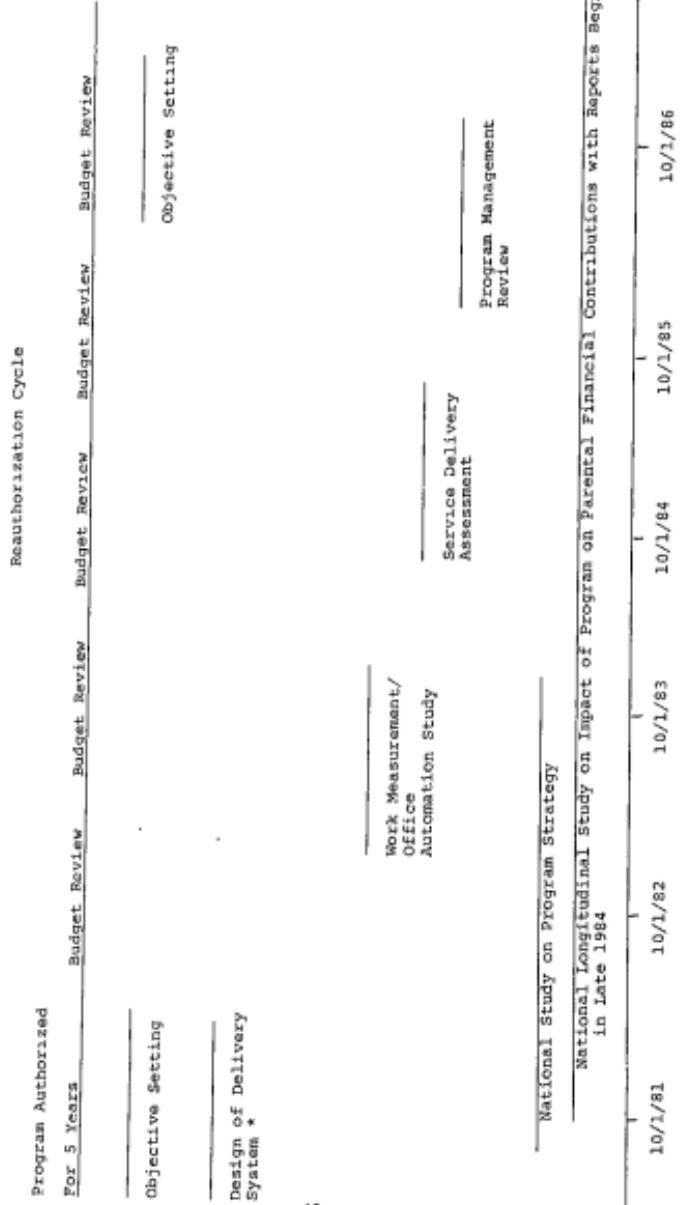
Dissemination of Evaluation Findings

A diverse audience awaits the results of ED evaluation activities. The most directly concerned are policymakers and program managers within the Department and the congressional committees which have jurisdiction over education programs (principally, the House and Senate Appropriations Committees, the House Education and Labor Committee, and the Senate Labor and Human Resources Committee). Local and State education officials, education-related public interest groups, parents, and a sizable community of evaluators show varying degrees of interest depending upon the evaluation in question. Communicating evaluation findings in a timely and useful fashion to responsible officials and an interested education community is critical to the success of the overall evaluation effort.

ED has adopted several strategies to ensure that its evaluation results are disseminated rapidly to influence subsequent program decisions or inform the education community. One new approach for reaching the broader education community with useful evaluation reports is this general circulation volume which, used in conjunction with volume II, provides a comprehensive overview of ED programs, the evaluation process, important new findings, and evaluation uses.

Several alternatives have been developed to assist the dissemination process within the Department. A new internal review procedure guarantees all key Department officials an opportunity to review and comment on the results of an evaluation study within strict time limits. The entire review is completed within a short period of time; comments or objections from reviewing officials may be incorporated into the final executive summary of the study.

EVALUATION PLANNING MODEL



* REQUIRES EVALUATION TECHNIQUES SUCH AS QUALITY CONTROL, MANAGEMENT ANALYSIS, AND ORGANIZATIONAL DEVELOPMENT EXPERTISE.

Regular staff briefings on evaluation findings can also be an effective mechanism for communicating evaluation information within the Department. For example, OEPM offers to brief each program office on the budget implications of evaluation findings. The budget briefing is keyed to the beginning of the annual budget-preparation cycle. The evaluation staff also meet with program officials to discuss the implications of evaluation findings on appropriations and legislative reauthorization hearings before congressional committees.

A newly established Program Resource Center within OEPM represents another way in which information on programs administered by ED will be made available to members of the Department. The center will collect and index all management and program evaluations conducted by ED or other Federal agencies (e.g., the General Accounting Office, the Congressional Budget Office) that pertain to Department programs or operations. Other program documents will be added as staff resources and time permit. At a minimum, the resource center will maintain copies of all final evaluation reports and executive summaries and other key evaluation documents referenced in the current edition of the Annual Evaluation Report. Eventually program files could include legislation, planning studies, policy analyses, program regulations, program guidelines, and annual program reports to the President, the Congress, or the Secretary of ED. Plans are underway to have as many documents as possible recorded on microfiche or magnetic tape for convenient access and long-term storage.

Efficient use of evaluation findings has become a top management priority in ED. Communicating findings quickly is an effective, indirect way of achieving this objective. A more direct approach for evaluation followup has also been developed on an experimental basis. When an evaluation report is likely to have a bearing on program legislation, budget decisions, major program operations, or management practices, the Office of Evaluation and Program Management, in cooperation with the Assistant Secretary for Planning and Budget and the appropriate program's Assistant Secretary, will establish an Evaluation Implementation Board. The Board, consisting of senior evaluation, planning and budget, legislation, legal, and program staff, will review the evaluation report and synthesize its findings into a decision memo for the Secretary, Under Secretary, or appropriate Assistant Secretary. The memo will contain policy-relevant and management improvement options and recommendations. Once decisions have been made, the Board will also develop an implementation time schedule.

CONCLUSION

Since the Department's creation, the evaluation function has changed direction. The scope of evaluation interest has been broadened to include all aspects of program operations. Program impacts are assessed as part of a complex process that includes ongoing program operations, budget, and management activities. Innovative management and evaluation techniques are now in place beside traditional evaluative methods. Greater attention is paid to systematic evaluation planning and comprehensive evaluation followup. The overall result is a flexible, responsive, and useful evaluation capability within ED.

NOTES

¹These activities are discussed later in this chapter.

²Two evaluability assessments that were begun in FY 1979 under the Department of Health, Education, and Welfare have been terminated. Managers of the Vocational Education Program and the National Center for Education Statistics asked that the assessments be stopped because the heavy workloads imposed by the transition into the Department of Education prevented their participation. Because of organizational and staffing changes which have since taken place, it would be necessary to start new assessments rather than attempt to finish either of these studies.

³They include: validation and measurement techniques; statistical quality control charts; regression analysis; and sampling techniques.

Chapter II

**Education Program
Overviews**

This chapter is an overview of ED program activities and evaluation findings that highlight program operations. The underlying theme of the following materials is diversity -- diversity in the types of programs ED funds, intended recipients, and the mechanics of program operations. Not only do programs vary widely, but occasionally so do implementation procedures within a single program. Nearly all variations result from the flexibility in program operations that the Congress mandates; States and localities are expressly given latitude in program implementation. In addition, the operations of State and local education agencies and universities differ enough that even a common legislative goal may translate into substantially different procedures and, perhaps, even results.

Understanding the diversity between ED programs, and occasionally within them, is one of the principal objectives of the Department's evaluation activities. It is also one of the greatest challenges because few definitive answers or generalizations result from this work. As will become evident in subsequent sections of this chapter, conclusions from even the most thoroughgoing and comprehensive evaluation studies are often reported with caveats. Caution is usually in order because of the changes expected to result from the influence of ED-funded programs. Overall educational achievement, for example, is influenced by a multitude of factors including unique individual, family, and community characteristics. Many of these factors cannot be measured; others cannot be controlled statistically.

While caution is clearly called for in interpreting broad educational change as a result of program activity, fairly reliable assessments of immediate program impact are possible. Subsequent sections describe such assessments. The elementary and secondary school overview discusses programs for low-achieving students, handicapped by poverty or a limited ability to speak English. Recent evaluation findings indicate that while Federal education funds have reached these intended recipients more effectively in recent years, there is still room for improvement. Progress has also been made in program implementation. Program impact on improving the academic skills of elementary and secondary school students is seen to vary by subject matter and grade level.

The overview of postsecondary education programs focuses on enhancing educational opportunity by providing Federal financial support to students and institutions. Over time, significant changes and differences are found in attendance at institutions of higher education by students' sex, family income, and race. The goals of Federal grant, loan, and work programs are to improve student access to and persistence in higher education and provide a range of institutional choices. This section assesses the degree to which Federal funding has succeeded in achieving these goals by utilizing the concept of student burden—the difference between the cost of attending a particular college and Federal aid received. Federal aid to institutions also affects students' postsecondary school opportunities. These influences along with student transfer patterns among higher education institutions are briefly reviewed in this section.

The third and final section of chapter 2 is an overview of the large and diverse number of education programs directed toward special recipient groups or particular educational needs. These include programs to improve the quality of educational practices; expand learning resources; foster occupational, career, and adult education; and assist the handicapped and Native Americans in receiving quality education. The results of evaluation studies in this section are as wide-ranging as the programs themselves. One general statement is

applicable however: funds for evaluating these special category programs have been extremely limited. A few have special evaluation monies (set-asides) authorized and appropriated by the Congress. Most do not. Given the relatively modest appropriation for many of these programs and the Department's extremely limited discretionary funds, many programs have not been formally evaluated. For these reasons, special category programs will benefit significantly from the new management improvements initiated in the Department and discussed in chapter 1.

ELEMENTARY AND SECONDARY EDUCATION PROGRAMS

Approximately 48 million students are currently enrolled in elementary and secondary schools. About 90 percent attend the 87,000 schools operated by nearly 16,000 public school systems; the other 10 percent attend non-public schools.

Many educators and the general public have expressed concerns about the conditions in our public school systems. According to an annual Gallup Poll, the public's rating of schools declined through the latter half of the seventies, but this decline may have come to a halt in 1980. Although only 28 percent of the public has a "great deal" of confidence in the public schools according to that poll, the standing of public schools exceeds that of all other important American institutions except churches.

The five major problems confronting public schools, as perceived by the poll's respondents, are: (1) lack of discipline; (2) use of illegal drugs; (3) poor curricula and standards; (4) lack of proper financial support; and (5) integration or busing. Lack of discipline was rated as a problem almost twice as often as any other topic.

Other public opinion polls register widespread concerns about education. But for many of the problem areas cited, it is difficult to describe the exact nature of the problem, let alone express the degree to which the problem is real. Measurement is relatively good, however, for educational achievement as reported by the U.S. Department of Education's National Assessment of Educational Progress (NAEP). Every few years NAEP assesses the educational achievement of 9-year olds, 13-year olds, and 17-year-olds in major academic subjects.

Most subjects were measured twice during the 1970's and, at the risk of some oversimplification, can be summarized for reading, math, writing mechanics, writing quality, science, social studies (9-year olds) and politics (teenagers) as follows:

- o 9-year olds (mostly fourth graders) showed slight improvements in reading, slight declines in math and science and not much change elsewhere.
- o 13-year olds (8th graders) and 17-year olds (12th graders) showed varying degrees of declines in knowledge of math, science, and politics, and showed essentially no change in reading and writing mechanics.

Part of the public's concern about education may reflect the measured declines in performance by teenagers.

Major Federal education programs are aimed at just a few of the national concerns about elementary and secondary education. The issues to be discussed in this section are education for low achievers (especially when achievement is related to low family income or limited English proficiency), school desegregation, and general improvement in educational practices. The primary questions are: (1) how well are Federal education funds getting to the intended beneficiaries; (2) how well have the programs been implemented; and (3) how effectively have the programs accomplished their objectives?

How Well Are Federal Education Funds Getting to the Intended Beneficiaries?

The efficiency with which Federal funds are targeted is indicated by two measures: the proportion of ineligible program participants and the proportion of eligibles not served. The latter measure is complicated by the fact that the percent of eligibles served is determined not just by the efficiency of the targeting process but also by the total funds available. If funds are insufficient, it is impossible to serve all the eligible population.

For Title I of the Elementary and Secondary Education Act (ESEA), extensive data pertaining to targeting are available for children in grades 1-6, grades where local school districts spend a high proportion of Title I funds. Results from the 1976-77 school year show that among students scoring below the median on achievement tests, 25 percent (approximately 2.5 million students) participated in Title I. Of children scoring above the median, only 4% percent participated in Title I. These results indicate that Title I is fairly well targeted on the low-scoring students but that many low achievers (7.3 million students) below the median do not participate.¹

Although the language of Title I seems to stress meeting the needs of low achievers, some hold that the funds should also be focused on children from low-income families. Moreover, a high correlation is often assumed between low achievement and poverty. The data indicate, however, that the correlation (*r*) is modest, ranging from .2 in the first grade to .3 in grades three to four. As a consequence, even though Title I funds are fairly well-targeted on low achievers, about 58 percent of the participants are not from poor families (based upon the Federal Government's poverty indicator).

The Title I migrant subprogram offers special services for the children of migrant workers. A Migrant Student Record Transfer System (MSRTS), using data supplied by school systems, estimates the number of program participants in 1979 at 522,000. The size of the eligible population is unknown, but it is believed that not all are served. There are probably two categories of unserved children: first, some unknown number of migrant children are seldom, if ever, enrolled in school; second, from 15 to 20 percent of eligible children enrolled in school are not registered on the MSRTS.² (An unknown percent of such children are probably not served.) On the other side of the targeting question, probably fewer than 2 percent of participating children are ineligible.

Some 51,000 Title I-eligible children are in State institutions for neglected or delinquent children, but 1976 data indicated that only 27,000 (53 percent) were receiving services. No estimate is available for the number of participating ineligibles. In both the migrant and neglected/delinquent programs, the differences between the numbers of children served and eligible can largely be attributed to targeting inefficiencies (not lack of funds) since programs are fully funded.³

In contrast to Title I, the ESEA Title IV-C Program (Support and Innovation Grants for Improving Local Educational Practice) is not aimed at a particular target group. However, the legislation requires that children attending nonpublic schools must receive program benefits on an equitable basis with public school students. Recent evidence indicates that nonpublic students are participating in programs funded by Title IV-C grants on a less than equitable basis. On the other hand, the majority of eligible nonpublic schools, and presumably their students, receive Title IV-B (Instructional Materials and School Library Resources) benefits for learning materials and library resources.

ESEA Title VII (Bilingual Education) is primarily for children of limited English proficiency. Though the program is funded at an amount greater than a demonstration program, it is substantially below the level required to serve all eligible children. Therefore, the percent of eligibles served is not a useful indicator of targeting efficiency. However, the percent of English-proficient children participating in the program is an appropriate indicator.

A 1978 study of Title VII found that less than one-third of participating students were of limited English proficiency. Although there was no legal restriction against participation by English-proficient children, a proportion of more than two-thirds was widely felt to be too high, and the Congress amended the law in 1978 to limit participation of English-proficient children to 40 percent. There has been no systematic check of the language proficiency of participating children since that change in the law.

In the Emergency School Aid Act (ESAA), the targeting issue pertains more to school districts than to schools or children. The purpose of the program is to encourage the voluntary elimination, reduction, or prevention of minority group isolation and to meet special needs incident to the elimination of segregation. Several studies have found that most funds for the basic grants subprogram went to districts that desegregated long ago. In response to this situation, the Congress recently amended the law to add recency of desegregation to the criteria for judging grant applications.

How Well Have the Programs Been Implemented?

It is by now widely acknowledged that social intervention programs are often poorly implemented. Federal programs in elementary and secondary education have not been exempt from this problem. It is also probably true that many evaluation studies of education programs have not given sufficient attention to assessing implementation.⁴ Inadequate technology (e.g., lack of instrumentation, data collection problems) and high costs are the main reasons for limited measurements of the degree of implementation.

Nevertheless, most evaluation studies do provide some information about implementation. ESEA Title I is a good example. The 1965 version of the law was not very specific about congressional intent. Initial direction from the former Office of Education was similarly loose. It is not surprising, therefore, that much early concern about the program focused on possible misuse of funds and actions inconsistent with the intent of the Congress. Over the years, however, both the law and program administration have become more rigorous.

Current evidence indicates that, on the whole, the Title I grant program to school districts is reasonably well implemented. Following the apparent intent

of the Congress, local projects tend to emphasize instruction in basic cognitive skills. Generally, Title I services supplement the usual services provided to disadvantaged children, and in amounts large enough to be clearly noticeable as an educational program distinct from that offered regular students. Much less is known about the proficiency of project management and the quality of instruction.

The Congress seems to have intended that the Title I subprogram for institutionalized neglected and delinquent children be similar in purpose and operation to the district grant subprogram. A recent study indicates that the projects do emphasize instructional services and that the Title I funds are indeed supplemental to State funds. Otherwise, there seems to be wide variation in how institutions implement the program. Actual receipt of services (as measured, for example, by hours of reading and math instruction) is less, on the average, for Title I students than for non-Title I students. The difference seems to exist because some institutions do not attach much importance to student attendance in the special Title I activities.

The implementation question is far different for a program such as ESEA's Title IV-C. Here the keynote is State and local flexibility, and the Congress has imposed very few constraints. A recent evaluation shows that management of the program has fostered flexibility. As a result, there is great variation among the States with respect to program administration and types of projects. However, the program did not, in general, lead to consolidated management of formerly categorical programs as may have been hoped.

The National Diffusion Program (NDP) takes a different approach toward improving school practice. With this relatively small program, a number of educational practices have been identified for which there is evidence of effectiveness. Evaluative evidence indicates that the National Diffusion Program has been successful in causing many school districts to adopt exemplary educational practices. Further, there is evidence that districts frequently adapt the practices to local circumstances. At this time, it is not possible to say with certainty whether good NDP implementation should be defined as high-fidelity adoptions with few local modifications, or vice-versa, or something in-between. Indeed, the answer may depend upon the kind of educational practice in question. Until there is further evidence on the effectiveness of adoptions, the question will be not answered.

The Emergency School Aid Act (ESAA), and especially the basic grants subprogram, exemplifies that program implementation depends upon the clarity of congressional intent as expressed in legislation. Results of several studies show that a high proportion of the basic grant funds are used for general education assistance or compensatory education rather than for desegregation assistance, which is the program intent. Although not an indication of illegal operations, these findings highlight the loose link between the program purpose and the actual use of funds. In 1978, the Congress amended the ESAA legislation to encourage a closer relationship between the program purpose and the activities funded.

How Effectively Have Programs Accomplished Their Objectives?

There is rarely, if ever, complete agreement among all members of the Congress or all administration officials about the objectives of Federal education

programs. The following results pertain to the most frequently stated program objectives.

Schools tend to focus ESEA Title I funds on reading and math instruction, especially in the elementary grades. Recent evidence (students tested in 1976-77) shows that for student reading achievement in grades 1, 2, and 3, Title I is effective in that Title I students learn to read at a rate faster than would be expected without Title I but not fast enough to catch up with regular students. In grades 4, 5, and 6, Title I does not impart benefits in reading. Math results show positive Title I effects in grades 1 through 6. The details of these results are rather complicated and the reader is advised to consult specific reports cited in the Title I section of volume II.

Among students in Title I projects for neglected or delinquent children (students tested in 1977-78), the reading and math scores were about what would be expected in the absence of Title I; that is, Title I is not having an impact on these students in those skill areas.

Information about the ESEA Title VII program comes from a study (students tested in 1975-76-77) of Spanish-English projects in their fourth or fifth year of operation. In English Language Arts, achievement gains of Title VII Hispanic students were less than those of non-Title VII Hispanic students. In math, the gains of the two groups were comparable.

An early (1973-76) longitudinal evaluation of the ESAA basic grant program found evidence of improved academic achievement in elementary schools but no improvement at the high school level. Emphasis subsequently shifted away from improved achievement as a program objective and toward improving relations among students. A recent study (data collected in 1978-79) found that students who received ESAA-funded human relations services showed greater improvement in measures of intergroup relations (e.g., attitudes, behavior, and self-concept) than students without such services. Evaluations of two other ESAA subprograms showed mixed results. One study found that ESAA Magnet Schools can be effective when used as a component of a comprehensive, district wide desegregation effort and when used in districts with a relatively easy desegregation task. Another study showed that organizations receiving grants from the ESAA Nonprofit Organization's subprogram were less effective in developing community support for desegregation than community groups not funded by ESAA.

Federal programs aimed at general improvement in educational practices are difficult to evaluate because of the diversity of practices and the sometimes intangible changes being sought. Thus, while it is clear that ESEA Title IV-C has encouraged State and local education agencies to try alternative educational practices, no overall statements can be made about the impact of those changes. Likewise, for the National Diffusion Program which seeks change in a more direct and specific way than Title IV-C, broad judgments can not be made regarding program impact on students.

Summary

An important role of program evaluation is to inform policymakers about program performance in targeting, implementation, and effectiveness. As studies are completed, evidence about each aspect of program performance

increases and so does knowledge about how to implement necessary program change. It is clear that conclusions about Federal education programs in elementary and secondary schools are mixed: in some cases (such as district grants of ESEA Title I) funds appear to be reaching the intended beneficiaries, providing services as outlined in law and regulations, and leading to modest accomplishment of overall goals. In others, the funds may be targeted appropriately but do not yet lead to services well focused on program participants. For these programs the effectiveness of program services is still largely untested.

Finally, an occasional evaluation in elementary and secondary education has found that participants in the program are not those identified as the needy group, with the result that policymakers in the Congress and the administration have had to clarify eligibility criteria (e.g., ESEA Title VII). Of course, this means that both implementation and effectiveness in Title VII need to be examined (or re-examined) since the characteristics of participants have presumably changed.

Individual elementary and secondary programs covered in volume II of this report offer examples of each type: programs which appear to be targeted appropriately, implemented well, and are effective; those which are well-targeted but need more attention in the area of implementation; and those whose target group has been modified based on findings of earlier evaluation studies.

POSTSECONDARY EDUCATION PROGRAMS

The primary goal of the Department of Education's postsecondary education programs is to increase educational opportunity. The strategy for achieving this goal rests principally on providing financial assistance to both students and institutions. Federal student assistance is awarded both directly and indirectly through State agencies and education institutions. In fiscal year 1980 the obligations for ED's student financial assistance programs totaled almost \$5.2 billion. Institutional assistance is granted primarily through the Developing Institutions Program and special programs for disadvantaged students. In fiscal year 1979, institutional assistance amounted to over \$400 million.

Participation Rates

Figures on college enrollment for 18- to 24-year olds during the 1970-78 period are presented in table 1. Participation rates for various subgroups tend to be more volatile than for the age group as a whole.⁵ Over this period, participation rates for males have declined while those for females have increased. In contrast to more or less constant participation rates for whites, participation rates for blacks and Hispanics have increased markedly.

Table 2 presents the annual enrollment rates of dependent students since 1974 categorized by family income (measured in current dollars). Over this 5-year period, a clear trend of declining enrollment rates in the over \$15,000 family income categories emerges for both males and females. This pattern contrasts with the enrollment rates for dependents from lower income families, which have remained relatively stable during this period.

Table 1

Total Number and Percentage of 18- to 24-Year Olds
Enrolled in College, By Sex, Race, and Spanish Origin (in thousands)

18- to 24-Year Olds		1970	1971	1972	1973	1974	1975	1976	1977	1978
AGE GROUP										
All 1/										
Enrolled	8,163	8,671	8,956	8,878	8,788	9,228	9,520	9,285	9,180	9,180
Total Group	20,632	21,613	22,160	22,522	22,530	22,959	23,360	23,336	23,313	23,313
% of Total	39.6	40.1	40.4	39.4	39.0	40.2	41.1	39.8	39.4	39.4
Male										
Enrolled	4,276	4,575	4,713	4,619	4,486	4,663	4,691	4,556	4,443	4,443
Total Group	9,498	10,071	10,447	10,630	10,673	10,915	11,108	11,166	11,107	11,107
% of Total	45.0	45.4	45.1	43.2	42.0	42.7	42.2	40.8	40.3	40.0
Female										
Enrolled	3,885	4,095	4,245	4,259	4,302	4,565	4,929	4,729	4,737	4,737
Total Group	11,134	11,542	11,713	11,832	11,857	12,064	12,272	12,170	12,206	12,206
% of Total	34.9	35.5	36.2	36.0	36.3	37.9	40.2	38.9	38.8	38.8
White										
Enrolled	7,481	7,865	8,073	7,976	7,807	8,191	8,454	8,149	7,970	7,970
Total Group	17,900	18,737	19,155	19,332	19,356	19,666	20,003	19,912	19,774	19,774
% of Total	41.8	42.1	42.1	41.3	40.3	41.7	42.3	40.9	40.3	40.3
Black										
Enrolled	513	668	753	748	803	883	981	927	971	971
Total Group	2,502	2,637	2,755	2,892	2,828	2,890	2,987	3,038	3,099	3,099
% of Total	20.5	25.3	27.3	25.9	26.4	30.6	32.8	30.5	31.3	31.3
Spanish Origin 2/										
Enrolled	n.a.	n.a.	214	278	358	368	383	327	332	332
Total Group	n.a.	n.a.	1,217	1,133	1,363	1,112	1,405	1,429	1,445	1,445
% of Total	n.a.	n.a.	17.6	23.5	25.9	26.0	27.3	22.9	22.9	22.9

1/ Students of other races are included in total for all students but are not listed separately.
2/ As attached

SOURCE: Calculated from U.S. Bureau of Census, Current Population Reports, Series, P-20, No. 222, Table 14; No. 241, Table 13; No. 260, Table 12. Nos. 272, 285, 303, 319, 333, Table 13. n.a. indicates that the data is not available.

Table 2

PERCENTAGE OF 18-TO 24-YEAR-OLD DEPENDENT FAMILY MEMBERS EMPLOYED IN COLLEGE,
BY SEX AND FAMILY INCOME

Family Income	Percent 18-24 Employed			
	1974	1975	1976	1977
All				
\$ 0- 4,999	13.0	14.3	14.5	13.1
5,000- 9,999	14.9	15.6	15.1	15.1
10,000-14,999	20.7	22.1	21.4	19.3
15,000-19,999	30.5	29.2	32.8	26.4
20,000-24,999	43.3	41.4	44.1	38.2
25,000 +	58.8	58.1	55.2	48.1
Male				
\$ 0- 4,999	16.0	16.7	17.2	14.4
5,000- 9,999	18.0	17.7	17.1	17.4
10,000-14,999	22.7	24.9	22.6	20.4
15,000-19,999	32.2	34.0	33.1	27.2
20,000-24,999	44.7	43.8	41.8	40.1
25,000 +	58.1	56.2	52.9	47.0
Female				
\$ 0- 4,999	10.6	14.3	12.6	12.1
5,000- 9,999	12.4	15.6	13.5	14.0
10,000-14,999	18.8	22.1	20.4	18.4
15,000-19,999	28.7	29.2	32.5	25.7
20,000-24,999	41.6	41.4	46.4	36.3
25,000 +	59.7	58.1	57.9	55.3

SOURCE: Calculated from U.S. Bureau of Census, Current Population Reports, Series P-20,
Nos. 286, 303, 319, 333, 346.

The patterns do, however, appear to be consistent with a general decline in the long-run financial benefits accruing to a postsecondary education -- a decline that is mitigated for certain population subgroups (minorities and the poor) by transfer payments in the form of student financial aid that is conditional upon attendance.

The preceding discussion has focused exclusively on college enrollment because no comparable time-series data exist for the noncollegiate sector of postsecondary education -- proprietary and public technical/vocational schools.

Improving Access and Choice Through Student Support

Enhancing educational opportunity through student financial aid programs removes financial barriers to a postsecondary education for qualified applicants (access) and provides each potential student with as wide a variety of postsecondary education options as possible (choice). A number of assumptions underlie this general position. They are: (1) that parents bear the primary responsibility for financing their children's education; (2) that students themselves bear some of the burden of financing their education; (3) that the portion of the financial burden borne by the students themselves be distributed as equitably as possible; and (4) that the most needy students be aided first.

ED-administered programs provide three types of student assistance. Grant or non-returnable aid is provided by the Basic Educational Opportunity Grant (BEOG), Supplemental Educational Opportunity Grant (SEOG), and State Student Incentive Grants (SSI) programs. Obligations for these programs totaled \$2.8 billion in fiscal year 1980. Loans are provided by the Guaranteed Student Loan (GSL), National Direct Student Loans (NDSL), and Health Education Assistance Loan (HEAL) programs. The 1980 obligations for these programs amounted to \$1.9 billion.⁶ Earnings are provided by the College Work-Study (CWS) Program. Obligations for CWS were \$550 million in fiscal year 1980.

The grant programs (as opposed to the loan and work programs) have come to serve distinct roles in removing financial barriers to access and increasing choice. Grants are seen as providing the financial support that less well-off parents are unable to provide. Loans and work-study jobs, on the other hand, offer students the means to share the financial burden of attending an educational institution. Offering the students both loan and work opportunities allows them a choice in the timing of when they ultimately bear their share of the financial burden. Work allows them to bear it concurrently with their schooling; loans allow them to put off the burden until after they finish their education.

Table 3 displays the proportion of undergraduate students enrolled on at least a half-time basis who were aided by one or more of ED's student assistance programs (BEOG, SEOG, NDSL, GSL, and CWS⁷) categorized by dependency status, family income, and category of institution attended.

In academic year 1978-79, 36 percent of all undergraduates who were enrolled on at least a half-time basis were receiving some student assistance from ED. Of those attending 4-year public institutions, 36 percent were receiving aid; of those attending 4-year private institutions, 45 percent were receiving aid; of those attending 2-year public institutions, 26 percent were receiving aid; of those attending 2-year private institutions, 37 percent were receiving aid; and of

Table 3

Percentage of Undergraduates Enrolled at Least Half-time Receiving Aid from at Least One of ED Student Assistance Programs
(Unduplicated Count) 1978-79

	<u>By Family Income Group</u>	<u>Percent</u>
<u>Dependent</u>		
	\$ 0- 5,999	76
	6,000-11,999	67
	12,000-17,999	47
	18,000-24,999	27
	25,000-29,999	21
	30,000 or more	8
<u>Independent*</u>		37
All Students		36
<hr/>		
<u>By Institutional Category</u>		
4 - Year Public		36
4 - Year Private		45
2 - Year Public		26
2 - Year Private		37
Proprietary		63

Note: These include only the Basic Educational Opportunity Grants, Supplemental Educational Opportunity Grants, National Direct Student Loan, Guaranteed Student Loan and the College Work-Study Programs; the State Student Incentive Grants Program is not included.

Source: "Study of Program Management Procedures in the Campus-Based and Basic Grant Programs - Stage 2", Applied Management Sciences, Silver Spring, MD; 1980. Contract funded by Office of Evaluation and Program Management/ED

* Considered independent of parental support for student aid distribution purposes.

those attending proprietary institutions, 63 percent were receiving aid. Overall, a greater proportion of students appear to be aided in the more expensive categories of postsecondary institutions.

As might be expected, among dependent students the proportion receiving student aid declined as family income increased. In the lowest income category (\$0 - \$5,999), 76 percent of the students received some form of assistance, whereas in the highest income category (\$30,000 or more) only 8 percent of the students received some assistance. Among independent students, 37 percent received aid from ED student assistance programs. These percentages are based on unduplicated counts of students receiving aid from any of the five ED programs.

Table 4 describes the extent to which undergraduates received aid from more than one ED program. BEOG recipients were least likely to receive aid from other ED programs; if they did receive other aid, it would most likely be a CWS job. The vast majority of SEOG, CWS, and NDSL recipients also receive BEOG assistance. There appears to be very little overlap between the loan programs. Only 10 percent of NDSL borrowers are reported to also have a guaranteed student loan, and only 16 percent of those with a guaranteed student loan are reported as having an NDSL.

Impact of Student Financial Aid Programs

The achievement of the "access" objective of the student financial assistance programs can be measured by the absolute size of the financial burden a student must bear if he or she is to attend a postsecondary institution. This "student burden" is the difference between the cost of attending an institution (tuition, fees, room, board, etc.) and the nonreturnable aid the student receives from his family, the Government, or other sources (i.e., family contribution, grants, and scholarships). Presumably the student burden is financed by some combination of borrowing and work activity, and thus for students attending postsecondary institutions, it can be measured by the sum of their loans, earnings from part-time work, and savings from summer work.

Two aspects of the student burden can be used in measuring the impact of student aid programs on "access." The first is the size of the student burden. If we assume that the student should be free to choose between current and future work activity, burden size should not exceed reasonable part-time earnings and summer savings alone, or reasonable borrowing alone. The second important aspect of the student burden as a measure of program impact is the degree to which it is equal or unequal across need categories, as measured by family resources, for different types of institutions (selectiveness, public or private, 2 years or 4 years). This aspect may be interpreted as measuring the degree of equality of financial opportunity, which is derived from the premise that the burden borne by students should be as equal as possible.

The performance of the student financial aid programs with respect to the "choice" objective can also be measured in terms of the student burden. Are all postsecondary education options "affordable" in terms of the burden a student must bear, regardless of family resources? If burdens increase, can they still be covered by available loans and work? Relative income equality is a second useful criterion in evaluating financial aid programs with respect to choice. The degree of equality in relative burdens serves as a measure of the extent to which

Table 4

Percentage Rates of Program Overlap in Student Aid Recipiency,
For Undergraduates in the Fall of 1979

o Of students receiving BEOG's,

24% received SEOG's,
36% received CWS,
25% received NDSL's,
10% received GSL's.

o Of students receiving SEOG's,

87% received BEOG's,
50% received CWS,
48% received NDSL's,
8% received GSL's.

o Of students receiving CWS,

82% received BEOG's,
37% received SEOG's,
35% received NDSL's,
14% received GSL's.

o Of students receiving NDSL's,

76% received BEOG's,
40% received SEOG's,
38% received CWS,
10% received GSL's.

o Of students receiving GSL's,

48% received BEOG's,
11% received SEOG's,
26% received CWS,
16% received NDSL's.

Source: "Study of the Impact of the Middle Income Student Assistance Act," Applied Management Sciences, Silver Spring, MD, 1980.
Contract funded by Office of Evaluation and Program Management/ED

grant programs equalize the financial terms upon which prospective students must choose between postsecondary options. Clearly, relative student burdens will be equal if the student burden associated with each education option is the same regardless of the student's family resources. An education option in this context can be defined by the total cost of attendance or the student's expense budget.

Evidence Concerning the Impact of ED's Student Financial Assistance Programs

Tables 5 and 6 show estimates of the mean expected family contribution, total grant aid received, and student burden borne by financial aid applicants, categorized by dependency status, family income for dependent students, and the cost (table 5) or type of the institution attended (table 6). The estimates of mean student burden are useful in assessing the impact of ED's financial assistance programs. It should, however, be remembered that these estimates are derived from data on aid applicants only.

A comparison of student burdens with what students can be reasonably expected to earn or borrow sheds light on the achievement of both the access and choice objectives of the student financial aid programs. As a reference, a student working at the minimum wage for 15 hours a week during the school year would earn approximately \$1,350. Summer work could reasonably produce another \$500 in savings. Therefore, from work alone a student should be able to finance a student burden of \$1,850, provided, of course, that a job exists. Under the Guaranteed Student Loan Program, all students are eligible to borrow up to \$2,500 per year for 3 years; "needy" students can be afforded loans by postsecondary institutions of up to \$2,500 in their first 2 years of study and another \$2,500 in their second 2 years under the National Direct Student Loan Program.

If access is interpreted as adequate financial resources to attend a 2-year public institution, the mean student burdens presented in table 6 indicate that the access objective has been reasonably accomplished. For all dependent students, the student burden could be easily financed by part-time work alone. The independent students' burdens are significantly higher but seem manageable if students commit much more time to work activities or are willing to take out sizable loans. Little change is noted if access is defined in terms of 4-year public institutions. Student burdens at these schools are higher for all categories, except independent students. Where higher, still easily financed by work activity.

What about choice? How feasible are the student burdens at private and proprietary schools? Looking at table 6, we see that the largest mean student burden is \$3,774 (for independent students at private 4-year institutions). A burden of this magnitude is approximately \$300 less than the sum of reasonable expected student earnings (\$1,850) and annual student borrowing (\$2,500). Where postsecondary education options are defined by their total cost in table 5, the largest mean student burden is \$5,349 (for independent students at institutions costing over \$6,000). A burden this large is almost \$1,000 more than the sum of what a student can borrow and reasonably be expected to earn (\$4,350). If these students choose to attend a high-cost private institution, they can do so only at great personal sacrifice.

Table 5

Mean Expected Family Contribution, Grant Aid and Student Burden for Aid Applicants by Dependency Status, by Family Income, and by the Student Expense Budget of the Institution Being Attended: 1979-80
(in dollars)

Student Expense Budget	a)	Dependent Students by Family Income					Independent Students	
		\$0 -\$5,999	\$6,000 -\$11,999	\$12,000 -\$17,999	\$18,000 -\$23,999	\$24,000 -\$29,999	\$30,000 and over b)	
0-	Expected Family Contribution	241	277	625	782	1,293	1,033	185
\$2,500	All Grants	1,067	1,063	829	798	603	365	849
	Student Burden	\$10	535	574	510	287	250	880
\$2,501 -	Expected Family Contribution	439	629	661	1,015	1,171	1,447	253
3,000	All Grants	1,230	1,096	1,082	852	694	396	722
	Student Burden	1,049	1,021	1,028	669	891	898	1,772
\$3,001 -	Expected Family Contribution	302	370	729	1,151	1,475	1,645	225
4,000	All Grants	1,766	1,670	1,473	1,201	823	1,010	948
	Student Burden	1,058	1,573	1,414	1,229	1,314	959	2,308
\$4,001 -	Expected Family Contribution	257	288	767	1,279	2,665	2,225	382
5,000	All Grants	2,280	2,271	1,820	1,238	752	1,007	1,218
	Student Burden	2,037	1,977	1,902	1,565	1,125	1,348	2,681
\$5,001 -	Expected Family Contribution	369	545	884	1,405	2,026	3,146	351
6,000	All Grants	2,612	2,405	2,002	1,934	1,634	979	1,424
	Student Burden	2,437	2,593	2,648	2,251	1,960	1,196	3,642
Over -	Expected Family Contribution	860	823	1,379	2,450	3,012	4,738	693
6,000	All Grants	3,293	3,386	2,884	2,811	2,258	1,421	1,515
	Student Burden	3,222	3,186	3,413	2,285	2,292	1,026	5,349

Note: a) The Expected Family Contribution is computed according to the Uniform Methodology, adjusted where appropriate as not to be less than \$1,100 for a student living with parents.

b) Cell frequency fewer than 30.

Source: "Study of the Impact of the Middle-Income Student Assistance Act," Applied Management Sciences, Silver Spring, MD 1980. Contract funded by Office of Evaluation and Program Management/ED.

Table 6

**Average Expected Family Contribution, Grant Aid and Student Burden For Aid Applicants by Dependency Status, by Family Income, and by Type of Institution Being Attended: 1979-80
(in dollars)**

Type of Institution	a)	Dependent Students by Family Income					Independent Students	
		0 -5,999	\$6,000 -11,999	\$12,000 -17,999	\$18,000 -23,999	\$24,000 -29,999	\$30,000 and over	
4 Year	Expected Family Contribution	173	351	656	1,392	1,774	2,382	414
	All Grants	1,600	1,699	1,308	1,078	744	866	1,097
	Student Burden	1,188	1,418	1,586	1,215	1,355	1,067	2,704
4 Year	Expected Family Contribution	488	505	1,109	1,670	2,475	3,976	516
	All Grants	2,999	2,829	2,438	2,347	1,944	1,382	1,631
	Student Burden	2,089	2,341	2,407	2,035	1,887	1,583	3,744
2 Year	Expected Family Contribution	486	559	761	1,126	1,497	1,987	349
	All Grants	1,086	1,078	1,033	792	590	585	918
	Student Burden	1,666	1,061	926	985	785	918	2,048
2 Year	Expected Family Contribution	598	458	697	1,122	2,004	4,162	493
	All Grants	1,664	1,771	1,377	1,138	1,024	850	1,093
	Student Burden	1,385	1,282	1,749	1,227	932	728	1,976
Proprietary	Expected Family Contribution	471	654	1,006	1,201	1,511	2,176	293
	All Grants	1,846	1,789	1,362	1,092	944	405	1,342
	Student Burden	1,958	1,805	1,691	2,151	2,440	2,064	2,733

Note a) The Expected Family Contribution is computed according to the Uniform Methodology, - adjusted where appropriate so as not to be less than \$1,100 for a student living with parents.

b) Cell frequency fewer than 30.

Source: "Study of the Impact of the Middle Income Student Assistance Act"; Applied Management Sciences, Silver Spring, MD 1980. Contract funded by Office of Evaluation and Program Management/ED.

Tables 5 and 6 present only mean student burdens; a fuller picture of the affordability of student burdens relative to what students can either earn or borrow is presented in table 7. This table shows the results of a comparison of individual student burdens with the amounts students could be expected to earn from part-time work (\$1,350), earn doing part-time work combined with savings from summer work (\$1,850), or borrow (\$2,500).⁹ The table indicates that all of the students attending the lowest cost institutions (\$0-2,500), presumably public 2-year and 4-year institutions, could have financed their student burdens with the subsidized GSL's or NDSL's, and 93 percent could have financed their student burdens with work alone. Moving to the next most expensive category of institution (\$2,501-3,000), 92 percent of the students could have financed their student burden with a subsidized loan alone, and 82 percent could have financed it by work alone. It is reasonable to assume that an accessible institution near every student falls within these first two budget categories, supporting the conclusion that access, or more specifically financial access, has nearly been achieved.

Table 7 shows that as institutional costs become greater, the percentages of students whose student burdens exceed allowable annual loan limits and reasonable levels of part-time earnings increase rapidly. Nonetheless, students still attend these institutions, making it reasonable to assume that students who are managing to enroll at more expensive institutions could also have attended less expensive ones. On the basis of what is presented in this table and in the two preceding tables, a considerable degree of real choice among postsecondary institutions exists for most students. But for many students choice comes only at the price of much higher personal sacrifice in terms of student burdens, particularly for the independent student.

Turning to the question of whether there is equality in the financial terms of access and choice among students with different family resources, we can look at table 5 again. A comparison of mean student burdens for differing dependency and family income categories within institutional cost categories indicates equality among dependent students whose family incomes are less than \$18,000. Mean student burdens tend to decline for dependent students as they move to higher income categories and increase markedly for independent students.

Table 8 provides another perspective on how the distribution of grant aid affects the degree of equality in the financial terms of access and choice. In this table, the hypothetical student burden in the absence of grant aid as a fraction of the student's expense budget is compared with the actual student burden as a fraction of that same budget. Each cell shows both the mean and standard deviation (a measure of dispersion about the mean) of the hypothetical and actual fractions for students in the cell. In all cases grant aid greatly reduces the percentage of a student's budget that must be financed with loans and/or work; the manner in which grants are distributed increases the inequality of the percentage for most categories of students. This increase in the inequality of student burden as a percent of the expense budget is most pronounced in the lowest cost category of institutions (\$0-2,500) and in all institutional categories for independent students.

In conclusion, it appears from the data available that ED's student financial aid programs have been reasonably successful in providing financial access to some level of postsecondary education for all prospective students with financial need.

Table 7

The Proportion of BEOO Student Aid Applicants Whose Student Burden Exceeds \$1,350, \$1,850 and \$2,500 Respectively

Budget Category	S.B. Greater Than \$1,350	Dependent Student by Family Income						Independent Students	All Students
		\$0	\$1,000	\$12,000	\$18,000	\$24,000	\$36,000 and over		
0-	S.B. Greater Than \$1,350	.09	.07	.09	.07	.03	0	.29	.15
\$2,500	S.B. Greater Than \$1,850	.01	.09	.04	.03	0	0	.18	.07
	S.B. Greater Than \$2,500	0	0	0	0	0	0	0	.00
\$2,501+	S.B. Greater Than \$1,350	.37	.26	.24	.13	.19	.04	.74	.39
3,000	S.B. Greater Than \$1,850	.06	.05	.04	.02	.02	0	.35	.18
	S.B. Greater Than \$2,500	.02	.01	.01	0	.02	0	.26	.00
\$3,000+	S.B. Greater Than \$1,350	.64	.66	.64	.43	.59	.29	.88	.69
4,000	S.B. Greater Than \$1,850	.29	.28	.21	.16	.20	.25	.76	.42
	S.B. Greater Than \$2,500	.08	.05	.03	.07	.09	.17	.52	.22
\$4,001+	S.B. Greater Than \$1,350	.73	.77	.72	.56	.38	.48	.90	.77
5,000	S.B. Greater Than \$1,850	.51	.58	.53	.47	.37	.41	.84	.67
	S.B. Greater Than \$2,500	.31	.24	.21	.21	.15	.16	.69	.46
15,001+	S.B. Greater Than \$1,350	.91	.92	.92	.80	.75	.58	.94	.86
6,000	S.B. Greater Than \$1,850	.79	.61	.70	.26	.66	.38	.91	.77
	S.B. Greater Than \$2,500	.41	.51	.54	.43	.40	.17	.83	.56
Over	S.B. Greater Than \$1,350	.96	.99	.92	.75	.70	.55	.91	.82
6,000	S.B. Greater Than \$1,850	.76	.81	.83	.64	.65	.40	.90	.75
	S.B. Greater Than \$2,500	.63	.65	.63	.50	.47	.32	.88	.66

Note: a) Cell Frequency Fewer than 30

Source: "Study of the Impact of the Middle Income Student Assistance Act"; Applied Management Sciences; Silver Spring, MD, 1980, Contract Funded by Office of Evaluation and Program Management/ED

Table B

The Effect of Grants on the Level and Variation in Student Burden as a Proportion of Student Budget, 1978-80

Budget Category	Student Burden as a Proportion of Budget	Dependent Student By Family Income										Independent Students		All Students	
		\$ 6,000 - \$11,999					\$12,000 - \$19,999					\$20,000 and over			
		N	SD	N	SD	N	SD	N	SD	N	SD	N	SD	N	SD
0- \$2,500	a) c) Without Grants	.89	.18	.85	.20	.69	.22	.64	.25	.44	.27	.49	.33	.89	.27
	b) c) With Grants	.24	.25	.24	.30	.21	.41	.09	.09	.13	.17	.18	.25	.46	.50
\$2,501- 3,000	Without Grants	.88	.17	.77	.22	.76	.18	.63	.20	.57	.21	.45	.15	.88	.24
	With Grants	.34	.22	.37	.19	.37	.17	.32	.16	.32	.21	.30	.13	.63	.34
\$3,001- 4,000	Without Grants	.91	.12	.93	.13	.88	.20	.68	.21	.59	.24	.55	.31	.91	.16
	With Grants	.42	.29	.44	.18	.39	.17	.34	.24	.36	.28	.27	.36	.67	.29
\$4,001- 5,000	Without Grants	.94	.25	.93	.16	.83	.19	.61	.32	.41	.33	.51	.31	.92	.20
	With Grants	.45	.10	.43	.19	.42	.20	.34	.27	.25	.29	.20	.35	.63	.25
\$5,001- 6,000	Without Grants	.93	.14	.90	.14	.84	.14	.75	.21	.64	.24	.43	.28	.93	.18
	With Grants	.45	.17	.43	.18	.48	.19	.40	.20	.35	.27	.25	.24	.67	.25
Over \$6,000	Without Grants	.88	.29	.89	.20	.82	.19	.68	.28	.50	.29	.40	.28	.89	.26
	With Grants	.44	.24	.43	.22	.44	.22	.32	.20	.30	.25	.21	.24	.68	.28

Notes: a) Student Burden Without Grants as a Percent of Budget = (Budget - Expected Family Contribution) / Budget

b) Student Burden With Grants as a Percent of Budget = (Budget - Expected Family Contribution) / Budget

c) The Expected Family Contribution is computed according to the Uniform Methodology, adjusted where appropriate so as not to be less than \$1,100 for a student living with parents.

d) Cell frequency less than 30

e) SD = Standard Deviation

Source: "Study of the Middle Income Student Assistance Act", Applied Management Sciences, Silver Spring, MD, 1980. Contract funded by the Office of Evaluation and Program Management/ED

These programs appear to have made even the most expensive postsecondary education options potentially affordable even for the poorest students. But attendance at high-cost institutions seems to come only at the price of very high personal sacrifice for certain categories of students, particularly the independent student.

The Middle Income Student Assistance Act (MISAA) became law on November 1, 1978. However, its provision affecting the BEOG, SEOG, and CWS programs did not take effect until the start of the 1979-80 academic year. The intent of this legislation was to reduce the student burden of middle-income students. To see if this occurred, one can compare the entries in this report's table 5 with those in a similar table in the 1979 Annual Evaluation Report.¹⁰ Table 9 presents this comparison in terms of the 1978-79 to 1979-80 change in each item.

What is the net effect of these changes? If we divide the dependent students between low and middle income at \$12,000 for schools that cost students up to \$5,000, and at \$18,000 for more expensive schools, we find that student burdens increased in 12 out of 14 low-income combinations, whereas student burdens decreased in 20 out of 22 middle-income combinations. This pattern of changes is highly significant statistically.¹¹ Thus, MISAA appears to have had its intended effect with respect to the middle-income students in that the mean burden appears to have been more clearly equalized for a number of budget groups. To a large extent, this equalization has been accomplished through an increase in the mean grant level. However, in a number of these groups there was a drop in the mean family contribution as well. Although at first glance, it may have appeared that MISAA "robbed Peter to pay Paul," in reality it has provided for the equalization of mean student burden levels.

Student Persistence

As noted in earlier Annual Evaluation Reports, past studies revealed that 70 percent of all entering freshmen eventually graduate from college. Fifty percent of this group graduated from the institution at which they started; the others graduated after transferring to other institutions. Furthermore, 30 percent of the students who transferred did so in their second year.

Analysis of recent data collected by an ED study on student persistence indicates that financial aid is related to student persistence in a positive manner. In particular, those students with a grant or a loan above \$1,000 were found more likely to persist. Financial aid, as might be expected, assists the low-income student more than a student from higher income families. Work aid appears to enhance the persistence of low-income students especially if they receive no grant aid. Work aid, however, does not appear to be a factor for higher income students especially if they already have a grant.

Improving Access, Choice, and Quality Through Support of Institutions

The Department of Education also administers programs that grant funds directly to the institution. Programs such as these allow the institution to maintain and improve the quantity and quality of the educational services it provides students without passing the full cost of these services on to students. These programs, like the student aid programs, also help the institution reduce or hold constant the burden to students in a period of rising costs by reducing the net cost of instruction.

Table 9

A Comparison of Changes in Dollar Amounts of Family Contributions, Grant Aid, and The Student Burden (Hark/Leans) From 1978-79 to 1979-80 by Family Income and By Student Budget a/

Institution Student Expense Budget	0 \$ 6,000 \$12,000 \$18,000 \$24,000 \$30,000 and over	Dependent Students						Independent Students	
		+ 5,099 +11,999 +17,999 +23,999 +29,999 and over	+ 32 + 72 + 104 + 90 + 88 + 454 + 108	+ 4 + 46 + 4 + 143 + 123 + 189 + 32	+ 157 + 156 + 57 + 97 + 638 + 592 + 256	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 49 + 157 + 227 + 358 + 236 + 195 + 275	+ 81 + 62 + 52 + 414 + 225 + 1,372 + 245	
\$2,500	Expected Family Contribution	+ 32 + 72 + 104 + 90 + 88 + 454 + 108	+ 4 + 46 + 4 + 143 + 123 + 189 + 32	+ 157 + 156 + 57 + 97 + 638 + 592 + 256	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 49 + 157 + 227 + 358 + 236 + 195 + 275	+ 81 + 62 + 52 + 414 + 225 + 1,372 + 245	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 49 + 157 + 227 + 358 + 236 + 195 + 275
\$2,501	All Grants	+ 4 + 46 + 4 + 143 + 123 + 189 + 32	+ 4 + 46 + 4 + 143 + 123 + 189 + 32	+ 157 + 156 + 57 + 97 + 638 + 592 + 256	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 49 + 157 + 227 + 358 + 236 + 195 + 275	+ 81 + 62 + 52 + 414 + 225 + 1,372 + 245	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 49 + 157 + 227 + 358 + 236 + 195 + 275
\$2,501	Student Burden	+ 157 + 156 + 57 + 97 + 638 + 592 + 256	+ 157 + 156 + 57 + 97 + 638 + 592 + 256	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 49 + 157 + 227 + 358 + 236 + 195 + 275	+ 81 + 62 + 52 + 414 + 225 + 1,372 + 245	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 49 + 157 + 227 + 358 + 236 + 195 + 275	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81
\$3,000	Expected Family Contribution	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 137 + 31 + 112 + 377 + 263 + 4 + 4	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 51 + 116 + 297 + 513 + 198 + 288 + 248	+ 51 + 116 + 297 + 513 + 198 + 288 + 248	+ 51 + 116 + 297 + 513 + 198 + 288 + 248	+ 51 + 116 + 297 + 513 + 198 + 288 + 248
\$3,000	All Grants	+ 51 + 116 + 297 + 513 + 198 + 288 + 248	+ 51 + 116 + 297 + 513 + 198 + 288 + 248	+ 137 + 31 + 112 + 377 + 263 + 4 + 4	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 131 + 144 + 97 + 281 + 112 + 442 + 213	+ 131 + 144 + 97 + 281 + 112 + 442 + 213	+ 131 + 144 + 97 + 281 + 112 + 442 + 213	+ 131 + 144 + 97 + 281 + 112 + 442 + 213
\$3,000	Student Burden	+ 131 + 144 + 97 + 281 + 112 + 442 + 213	+ 131 + 144 + 97 + 281 + 112 + 442 + 213	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 45 + 81 + 179 + 247 + 8 + 1,068 + 81	+ 201 + 38 + 113 + 353 + 289 + 877 + 263	+ 201 + 38 + 113 + 353 + 289 + 877 + 263	+ 201 + 38 + 113 + 353 + 289 + 877 + 263	+ 201 + 38 + 113 + 353 + 289 + 877 + 263
\$4,000	Expected Family Contribution	+ 31 + 62 + 122 + 263 + 76 + 181 + 4	+ 31 + 62 + 122 + 263 + 76 + 181 + 4	+ 359 + 59 + 200 + 128 + 341 + 181 + 4	+ 31 + 62 + 122 + 263 + 76 + 181 + 4	+ 113 + 21 + 227 + 172 + 46 + 564 + 29	+ 113 + 21 + 227 + 172 + 46 + 564 + 29	+ 113 + 21 + 227 + 172 + 46 + 564 + 29	+ 113 + 21 + 227 + 172 + 46 + 564 + 29
\$4,000	All Grants	+ 113 + 21 + 227 + 172 + 46 + 564 + 29	+ 113 + 21 + 227 + 172 + 46 + 564 + 29	+ 359 + 59 + 200 + 128 + 341 + 181 + 4	+ 31 + 62 + 122 + 263 + 76 + 181 + 4	+ 201 + 38 + 113 + 353 + 289 + 877 + 263	+ 201 + 38 + 113 + 353 + 289 + 877 + 263	+ 201 + 38 + 113 + 353 + 289 + 877 + 263	+ 201 + 38 + 113 + 353 + 289 + 877 + 263
\$4,000	Student Burden	+ 201 + 38 + 113 + 353 + 289 + 877 + 263	+ 201 + 38 + 113 + 353 + 289 + 877 + 263	+ 31 + 62 + 122 + 263 + 76 + 181 + 4	+ 31 + 62 + 122 + 263 + 76 + 181 + 4	+ 158 + 26 + 100 + 645 + 295 + 242 + 4	+ 158 + 26 + 100 + 645 + 295 + 242 + 4	+ 158 + 26 + 100 + 645 + 295 + 242 + 4	+ 158 + 26 + 100 + 645 + 295 + 242 + 4
\$5,001	Expected Family Contribution	+ 188 + 328 + 617 + 1,068 + 234 + 734 + 4	+ 188 + 328 + 617 + 1,068 + 234 + 734 + 4	+ 187 + 358 + 487 + 795 + 734 + 324 + 4	+ 188 + 328 + 617 + 1,068 + 234 + 734 + 4	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13
\$5,001	All Grants	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13	+ 187 + 358 + 487 + 795 + 734 + 324 + 4	+ 188 + 328 + 617 + 1,068 + 234 + 734 + 4	+ 1,013 + 834 + 905 + 19 + 76 + 52 + 1,061	+ 1,013 + 834 + 905 + 19 + 76 + 52 + 1,061	+ 1,013 + 834 + 905 + 19 + 76 + 52 + 1,061	+ 1,013 + 834 + 905 + 19 + 76 + 52 + 1,061
\$5,001	Student Burden	+ 1,013 + 834 + 905 + 19 + 76 + 52 + 1,061	+ 1,013 + 834 + 905 + 19 + 76 + 52 + 1,061	+ 188 + 328 + 617 + 1,068 + 234 + 734 + 4	+ 188 + 328 + 617 + 1,068 + 234 + 734 + 4	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13	+ 1,526 + 173 + 234 + 355 + 150 + 170 + 13

Source: "Study of the Impact of the Middle Income Student Assistance Act", Applied Management Sciences, Silver Spring, MD 1980. Contract funded by the Office of Evaluation and Program Management/ED.

Note: a) The purpose of this table is to show how passage of NISAA affected key financial components of student resources by family income. No adjustment was made for inflation of family income and student budgets.

Federal institutional aid programs administered by ED make up about 7 percent of the total ED higher education budget (\$379 million in fiscal year 1980 of a total of \$5.3 billion).¹² Title III of the Higher Education Act (HEA), the Developing Institutions Program, accounts for a little less than one-third of this total (\$110 million in fiscal year 1980). Title III promotes detailed institutional program planning, curriculum development, faculty development, and improved administrative practices by providing resources to help participating institutions finance these programs. Generally, the focus has been on institutions that serve large numbers of disadvantaged students. This focus is consistent with the larger goal of Federal aid for postsecondary programs: to enhance equal educational opportunity. HEA-Title III program eligibility criteria have included as a key factor the relative number of disadvantaged students the institution serves. Thus, the program can be said to be on target if the relative number of disadvantaged served in developing institutions exceeds those in the student population as a whole. BEOG recipients, the economically disadvantaged students, on the average made up 28.5 percent of the student body in HEA-Title III institutions compared to 17.9 percent for other 2- and 4-year colleges in academic year 1977-78.

Recent program participants provide the only available evidence on program effectiveness. Few participating institutions have closed since the inception of the program. Given that access and choice are Federal goals and since these institutions serve large numbers of low-income students, the closing of any institution would reduce the number and choice of postsecondary education institutions available for students enrolled in the affected institutions.¹³ Evidence shows that proximity to public and private nonselective colleges influences college entrance and that low-income students tend to live at home while attending college. The distance from home to college is strongly and consistently associated with parental income even after other student characteristics such as parental education, ability, and race have been taken into account.¹⁴ Thus, certainly choice and, to a lesser degree, access are reduced with the closing of any institution.

While student financial assistance programs can be judged in terms of their impact on either removing or equalizing financial barriers for students, other Federal programs are aimed at assisting the student by removing nonfinancial barriers to access and choice. Target groups for these programs are disadvantaged persons with academic promise who lack adequate academic preparation or who are insufficiently motivated.

The programs attempt to identify potential students and provide them with counseling and remedial assistance to encourage them to enter and persist in postsecondary education. Present programs focus on students both at the precollege and college levels; however, current funding levels allow for serving no more than one in seven students who might otherwise qualify.

The recently completed study of the Upward Bound Program identified substantial impact upon students' entry into and persistence in postsecondary education programs. Currently, a major study of the Special Services for Disadvantaged Students Program is in progress. It is, however, too early to report on the impact of the Special Services Program. More detail on each study is presented in the program section of volume II along with program and study information on the Talent Search and Educational Opportunity Center Programs.

In addition, the Department of Education administers a number of small categorical and grant aid programs (\$30 million or less in annual appropriations). Included are fellowship programs, construction assistance, and international education. These programs are also discussed in detail in volume II.

SPECIAL CATEGORY PROGRAMS

Occupational, Adult, and Career Education

The major special category programs are authorized by the Vocational Education Act (VEA), the Adult Education Act (AEA), and the Career Education Incentive Act (CEIA) which, with the exception of the CEIA, are administered by the Office of Vocational and Adult Education. The CEIA is administered by the Office of Elementary and Secondary Education.

By far the largest source of Federal support for these special category activities is allocated to vocational education programs. The purpose of vocational education is to help individuals bridge the gap between education and work by providing the knowledge and training needed for specific occupations. Currently, funding for Federal vocational education programs is of two basic types:

- o Formula Grants to States

Allocated on a formula basis, these grants assist States to maintain, extend, and improve existing programs of vocational education so that persons of all ages will have ready access to high quality vocational training or retraining; to develop new programs of vocational education; and to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis,

Funds are distributed through three separate authorities: (1) Programs for Disadvantaged; (2) Basic Grants to States; and (3) Consumer and Homemaking Education. The largest is Basic Grants (\$562,266,000 in FY 1980).

- o Discretionary Programs

Three programs award grants and/or contracts at the discretion of the Secretary: Programs of National Significance (research, demonstration, and development projects); the Program for Indian Tribes and Organizations; and the Bilingual Vocational Training Program.

Because of a sevenfold rise in public outlays for vocational education during the last decade, more than one-third of the Nation's high school students now take vocational subjects. While it is true that initial Federal expenditures for vocational education programs in 1963 gave impetus to State and local spending for these programs, no studies have been conducted to determine whether the Federal program's impact on State/local spending continues. Though it is widely believed that Federal dollars no longer stimulate the expenditure of State and local funds because of the large State and local overmatch, Federal set-asides for national priority groups do have some catalytic effect. For example, set-

asides for the disadvantaged and handicapped have increased the number of programs for these groups. No evidence is available to show whether the postsecondary set-aside is responsible for the doubling of postsecondary vocational enrollments (e.g., in community colleges) since 1970.

Measurement problems and interpretation ambiguities make it difficult to determine whether or not vocational education has been successful. One problem is that employment is not the primary objective of all vocational students. Another is that economic conditions probably much more powerfully influence employment choice among youth more than does curriculum choice. Despite these limitations, the data from four national longitudinal studies provide a sufficiently long timeframe to assess employment outcomes for vocational education graduates.¹⁵

- o Taken together, the longitudinal studies suggest that most secondary vocational education have no labor market advantages. The exceptions are the young women trained in the office occupations. Compared to their male counterparts and other vocational education graduates, they experience fewer periods of unemployment, have higher hourly wages, and work in jobs related to their training. Other high school vocational get jobs not too unlike nonvocational graduates within 3 years after graduating; experience similar rates of pay and unemployment; have similar degrees of job satisfaction; are no more knowledgeable about occupations than nonvocational students. Vocational education students are as likely to drop out as other students; are less likely than other graduates to continue formal education in colleges and universities but will most likely seek additional occupational training. Postschool training (outside of colleges) pays off more for vocational graduates than for other graduates.
- o Because secondary vocational students have lower aptitude test scores and tend to come from poorer families than other students, it is often assumed that these students would lose interest in school if vocational education were not available. This hypothesis, however, has never been tested.
- o Other studies of postsecondary students indicate they are more likely to enter training-related jobs.

The Vocational Education Act supports programs that train persons in specific occupational skills and is primarily focused on training at the secondary and postsecondary levels. The career education legislation emphasis is on building a broad understanding of different types of work at the elementary level with later development of decisionmaking skills in deciding on appropriate occupations. The Career Education Incentive Act (Public Law 95-207), passed in December 1977, authorizes formula grants to assist States in implementing career education in local schools. It also continues the Secretary's discretionary authority to make demonstration grants to State and local education agencies and to postsecondary institutions a provision not yet implemented.

The Adult Education Program focuses on yet another aspect of the transition from school to the world of work. Specifically, its legislation provides for

support to the States for projects which will assist adults in obtaining the basic skills (i.e., language and computation skills) necessary to function effectively in an occupation.

Programs for the Handicapped

The several programs authorized under the Education of the Handicapped Act (EHA) have one or more of four basic purposes: (1) provision of direct services; (2) development, demonstration, and dissemination of new technologies, teaching methods, and materials; (3) training regular and special education personnel; and (4) program evaluation. In each program, the role of the Federal Government has been stimulative, whereby it provides "seed" money to States and other grantees to stimulate increased quantity and quality in all services and to assure that program benefits reach previously unserved handicapped children. The strategy for evaluating programs for the handicapped is to determine if they have accomplished their specific purposes and, more generally, have had the desired stimulative effect. Accordingly, evaluation studies have been of two kinds: (1) those designed to obtain objective data on the impact and effectiveness of specified programs, particularly those which represented a major Federal investment of funds; and (2) those designed to provide policy-relevant planning information to enable the Federal Government to target its resources more effectively.

Studies of the first type found that, in general, these programs have accomplished their specific purposes. Efforts to isolate the stimulative effect and to demonstrate a causal relationship attributable to Federal programs have been complicated by factors outside the control of Federal evaluators and program managers. Examples of these factors range from effective lobbying by parents and professional groups with special interests in education of the handicapped to court cases which have demonstrated that handicapped children have not had equal access to educational opportunities. Because of these events, an increase in resources for handicapped children has led to a corresponding gradual increase in the number of handicapped children receiving services. As noted above, the degree to which Federal programs have contributed to this increase has not been clearly determined. Furthermore, attempts to demonstrate this effect have been complicated by recent legislation which has resulted in a significant redefinition of the Federal role in education of the handicapped.

The Education for All Handicapped Children Act of 1975 (P.L. 94-142) amended EHA, Part B, in the following ways:

- o It explicitly states that Federal assistance to States is to assure access to a free, appropriate public education for all handicapped children.
- o It specifies that the unserved have first priority and that the most severely handicapped within each disability category who are not receiving an adequate education have second priority for services relative to all handicapped children.
- o It indicates that handicapped children should be served in the least restrictive environment consistent with their needs and abilities.

- o It specifies that each child shall have the benefit of an individualized educational program which will be updated at least annually.

The Office of Special Education and Rehabilitation Services has data which show progress in achieving these legislative objectives. For example:

- o Almost 77 percent of the Nation's handicapped school-age children are receiving special education and related services today compared to less than 50 percent at the time P.L. 94-142 was enacted.
- o In the annual child count for the school year 1979-80, 46 of the 58 States and Territories (79 percent) reported an increase over 1978-79 in the number of handicapped children receiving special education and related services.
- o Since the passage of P.L. 94-142, over 317,000 additional handicapped children have been reported to be receiving special education which has required the hiring or reassignment of approximately 19,000 teachers.
- o The number of preschool children ages 3 through 5 receiving special education has increased by more than 36,000 in the past 4 years, a growth of more than 10 percent.
- o Since the enactment of P.L. 94-142 in 1975, the number of previously institutionalized handicapped children being served by local districts has increased by almost 61 percent.

Developmental Programs in Education

A major purpose of several programs administered by ED is to improve the quality of educational practices. These programs are:

Basic Skills Improvement	Indian Education, Part B
Community Education	Indian Education, Part C
Consumer Education	Metric Education
Education in the Arts	Teacher Corps
Gifted and Talented Education	Teacher Centers

All of these programs support demonstration projects. Because of limited evaluation funds, however, only three programs have been evaluated: Community Education, Teacher Corps, the Right-To-Read portion of Basic Skills Improvement.

Community Education

The purposes of this program are to demonstrate effective practices in community education and to stimulate wide adoption of these practices. A recent study indicates that the program has been quite effective in achieving its purposes. For example:

- o Substantial levels of effort (e.g., personnel, material support, and people and geographic areas served) in keeping with the terms of Federal grants and Federal policy have been expended.

- o These levels of program effort and activity were achieved, in part, because there were substantial commitments of non-Federal resources supplementing the Federal funds.
- o The majority of the projects which had received Federal funds for only one year were continuing at least some of these activities and in several, the level of effort even without Federal funds had increased.
- o These project-supported activities had produced desired effects on the educational systems and broader community and also produced identifiable changes in individuals which were appreciated by the project participants.

The primary negative finding was that recordkeeping at the project level was inadequate. Routine, programmatically meaningful data do not now exist.

Teacher Corps Training

Teacher Corps is currently implementing a new program whereby its field projects in partnership with an institute of higher education (IHE), a school district, and a community advisory group, provide inservice training for teachers that is responsive to both district and community needs, with a hoped-for side benefit of reforming IHE teaching practices. Additionally, the training is intended to instill a greater sensitivity to the needs of minority and/or disadvantaged children so that the teacher can work more effectively with these children. Teacher Corps expects to demonstrate several program models directed toward these objectives.

A study of Teacher Corps graduates of preservice training projects showed partial success in achieving similar objectives. Teacher Corps graduates were most different from control group teachers in (1) developing ethnically relevant curricula; (2) using community resources in teaching and for contacting parents; and (3) having positive attitudes about reading development and causes of poverty in the society.

These findings reflect Teacher Corps' special concern about low-income minority group children. However, teacher performance measures in the study showed no differences in such categories as teachers being a change agent in the school or in interaction between teacher and pupils in the classroom. Further, no significant differences between Teacher Corps and control group classes were revealed on any reading measure, despite a greater emphasis on reading instruction and academic subjects by control group teachers in grades 2-3. Teacher Corps graduates, however, brought about significantly greater changes in a child's self-concept than those brought about by control group teachers. These changes consisted of observed expressions of greater happiness and greater self-worth in the classroom, and better scores on important subscales of the Piers-Harris self-concept scale.

Basic Skills Improvement -- Right-To-Read

This new program extends the scope of the Right-To-Read program, with increased responsibilities for improving written and oral communication skills, and mathematics and reading skills. The transition from Right-To-Read to Basic Skills Improvement took place in October 1979.

Case studies of the Right-To-Read State Leadership Program indicate that the State components of the Right-To-Read program, with a modest amount of money, appears to have been successful. For example:

- o State Right-to-Read programs have made considerable efforts to involve large numbers of local districts in Right-To-Read efforts.
- o Training has been a major focus in the State Right-To-Read Programs. Local district directors received from at least 30 to more than 200 hours of training.
- o Data indicated that States will continue Right-To-Read even in the absence of Federal funds.
- o While Right-To-Read programs have been implemented at least to a minimal degree across grade levels, the major programmatic focus of Right-To-Read has been at the elementary level.
- o Reading has become a top priority in State and local education agencies.

None of these outcomes relate directly to the reading achievement of students, because the study was designed solely to assess type and level of technical assistance activities (none of which have a direct effect on students) fostered by the State component of Right-To-Read funding.

Overcoming Obstacles to Equal Education Opportunity

Several ED programs are authorized to help overcome obstacles to learning. Among those with recent data are programs for Native Americans and one for preventive education on alcohol and drug abuse.

Indian Education

Projects to meet the special education needs of Indian children are funded under Part A of the Indian Education Act. A study of this program found that: 62 percent of these projects focussed on instruction in cultural heritage and native language; 58 percent emphasized remedial reading; 56 percent emphasized self-concept objectives; and 46 percent emphasized remedial mathematics objectives. Innovative projects were not always effectively implemented. However, the study shows that effective implementation appears to be a function of the project's grant size, objectives, parent involvement, and Indian population density.

Alcohol and Drug Abuse Education

This program has implemented a new strategy which it describes as "teams teaching teams." It is hoped that the new strategy will achieve a multiplier effect through a two-step process: (1) teams are trained in "clusters" rather than in geographically unrelated groups;¹⁶ (2) the most impressive trainees in these clusters become, through further training and 1 year of onsite technical

assistance, new trainers for other schools and groups of schools in their district or community, while continuing to receive some technical assistance from the Federal program.

Two studies funded by the program found that: (1) trainees felt their training was effective; (2) one-half to two-thirds of the teams were still functioning a year or two after training; (3) the majority (about 80 percent) of the teams were performing activities for which they had been trained; and (4) in the judgment of the evaluators, these activities were effective. There has been no definitive evaluation of impact on student behavior. However, voluntary reports from operating teams cite evidence of substantial decreases in suspensions, vandalism, and discipline infractions. Several teams have provided evidence of a multiplier effect both by increasing the numbers of teams (and therefore schools covered) through training and, in some instances, by raising financial support. Since the program does not provide financial support for such reporting, many teams do not provide reports and, therefore, it is not claimed that the reporting teams are representative of all teams trained.

Learning Resources To Improve the Educational Experience

A number of programs administered by ED do not contribute directly to the educational process but do develop resources which serve as important adjuncts to the process. The primary function of most programs in this category is to improve library services; three other programs are involved in some aspect of educational television. The programs are:

Libraries and Learning Resources
Library Services
Interlibrary Cooperation
College Library Resources
Library Career Training
Library Research and Demonstration
Strengthening Research Library Resources
Educational Television and Radio Programming Support
Emergency School Aid Act (ESAA)- TV Programming Support

Library programs provide a variety of support ranging from grants for "hardware" (e.g., equipment) and "software" (e.g., recorded instructional packages) to upgrade the resources of school, college, and public libraries, to training fellowships, and to research and demonstration projects to improve the quality of library practices and services. The programs focused on educational television and radio either support program (series) development or improvement of broadcast facilities.

ESAA-TV

As part of an ongoing study of this program, a survey was conducted to determine the extent of viewing of TV series produced with ESAA support. The survey findings include:

- o Availability to Potential Target Audiences. For the 11 TV series available for viewing, the percentage of potential target audiences residing in areas where the series were aired ranged from 3 percent to 81 percent. Four series could be viewed by

between 32 percent and 42 percent of the target group, and four other series could be viewed by 74 percent to 81 percent of the potential target audiences.

- o Awareness of the TV Series. A relatively small proportion of children were found to be aware of the TV series. The percentages of awareness generally fell in the 20 percent to 40 percent range but went as low as 4 percent and as high as 55 percent. Overall, less than a third of the children had heard of the ESAA series being shown in their areas.
- o Viewing at Some Time in the Past. Generally, between 10 and 25 percent of the children reported having ever seen an ESAA-TV series.
- o Viewing Last Week. The proportions on this item were low, with most ranging between 0 and 5 percent.
- o Preference of ESAA Series. Children were asked to indicate their preference between the ESAA series and its competitors in the same time slot. In grades 1 and 4, between 5 and 10 percent indicated preference for the ESAA series; in grades 7 and 10, between 0 and 5 percent indicated such a preference.

The viewing data can be interpreted in three ways. The first compares ESAA-TV to entertainment television. Given this standard of comparison, the low viewership of the ESAA-TV series may be a cause for concern. A second standard of comparison sees ESAA-TV as educational/public television. The viewership findings indicate that ESAA-TV is comparable to other public TV programs, which always draw a smaller share of the audience than entertainment programs. Finally, ESAA-TV can be perceived as an alternative means to reduce cultural isolation. This perspective seeks to examine the number of children served through various alternative mechanisms; however, the necessary data for this comparison are not presently available.

Evaluative studies have recently been completed for the Library Research and Demonstration Program and the Interlibrary Cooperation Program.

The Library Research and Demonstration Program (Title II-B of the Higher Education Act) has had a significant impact upon the library and information community. Title II-B provided millions of dollars for innovative research and demonstration; previously few funds were available. This is the only Federal program that supports a wide range of research to improve public library services. It has generated new knowledge about innovative approaches to networking, serving special target groups, using community resources, and new technologies. Several projects have been successful locally. A few have had national impact, such as the series of projects which contributed to the development and improvement of the Ohio College Library Center.

Program weaknesses include lack of adequate national dissemination, failure to adopt successful practices, and lack of a national program strategy.

The Interlibrary Cooperation Program, Title III of the Library Services and Construction Act (LSCA), has influenced the development and expansion of library cooperation in a number of ways. It is a major force behind the

development of multi-library cooperation and networking, primarily at the State level. Along with Title I of this Act (Library Services Program), Title III has resulted in greater centralization of planning and administering library services at State and regional levels. It was also credited as a major influence on State legislatures to modify or pass legislation favoring cooperation and networking. Activities and services to increase access to library resources and to provide librarians with needed continuing education were listed as the major outcomes of the cooperative and networking projects.

Although Title III has had a definite, positive impact on the development of multi-library cooperation and networking, several shortcomings and anomalies were identified. First, significant amounts of LSCA Title I funds (approximately 20 percent of the fiscal year 1976 appropriation) were used by the States to partially or completely support multilibrary cooperation and networking activities. It is not known whether this use is detrimental to the mandate of Title I (development and support of States' efforts to expand and extend public library services to the unversed and underserved), or if this is an effective means of supporting these types of projects.

Second, LSCA Title III was providing support for projects that had become integrated into the States' basic programs of library services. This finding should not be interpreted as indicating that the States are misusing Title III funds. The legislation clearly specified that Title III funds can be used to support cooperatives and networks. However, given the modest funding level of Title III and the level of use of LSCA Title I and State funds, a shift in emphasis may be considered. Slightly more than 85 percent of the projects receiving Title III funds were ongoing projects, scheduled to continue operations for an indefinite period of time. Only 14 percent of the projects were short-term, trial projects. These figures suggest that Title III funds are targeted more at operational activities than at riskier research and development activities.

Further, the range of cooperative and networking services supported by Title III projects was restricted. The interlibrary loan and reference and referral services were probably efficient and a proper means of gaining access to a wide variety of libraries. But there was some question as to how many patrons actually needed and used these services; and there were a number of other essential library support services (e.g., document access and sharing, warehousing and shared storage of low-use materials) which were not being provided. The question raised is: How more Title III funds can be directed toward exploring new forms of cooperation and networking which will further increase the efficiency and economy of library services, as well as increase access to library resources.

NOTES

¹Of the 5 million children who scored in the bottom quarter, only 32 percent (1.6 million) participated in Title I.

²For these and other reasons, State allocations of Title I migrant funds are less than what they might be if all migrant children were identified properly.

³Fully funded in this sense means that allocations to States are a product of the number of eligible children and the authorized per pupil expenditure, and the grants are computed and funded "off-the-top;" that is, even when the Title I total appropriation falls short of the authorized level, grants in these two programs remain undiminished. Grants to school districts under Part A are reduced as necessary.

⁴A recent review of educational evaluation recommended greater attention to measuring implementation. See Robert F. Boruch and David S. Cordray, A Comprehensive Study of Evaluation Practices and Procedures in Federally Funded Elementary and Secondary Education Programs. Study funded by the U.S. Office of Education, 1980.

⁵College enrollment rates over time for various subpopulations (defined by characteristics such as family income, sex, race, and ethnicity) indicate changes in students' pursuit of postsecondary school opportunities. However, enrollment rates by themselves say nothing about how overall opportunities for college-age youth have been changing. For example, any potential increase in enrollment figures for low-income or minority students by increasing available financial aid may be offset entirely or partially by improvements in employment prospects for noncollege-educated individuals. Such a phenomenon would be most noticeable for students whose performance in college is predicted to be "marginal." Tables presented in this section should be interpreted with this in mind.

⁶The \$1.9 billion is the Federal subsidy for interest, defaults, administrative costs, and capital contributions for these programs. However, the actual value of loans made under the program totaled to \$3.5 billion.

⁷The State Student Incentive Grants (SSIG) Program is not included in this discussion, since it provides matching grants to States to be used in their own student-aid programs and, as such, cannot be differentiated from State funds by recipients or financial aid administrators.

⁸It should also be remembered that there are many students above the mean. Thus, the mean is only a broad measure of impact and should be thought of as such.

⁹Each cell entry indicates the percentage of aid applicants in the cell whose student burden exceeds the amount indicated at the left -- \$1,350, \$1,850, and \$2,500.

¹⁰See Annual Evaluation Report on Programs Administered by the U.S. Office of Education: Fiscal Year 1979, U.S. Office of Education, HEW, p. 256.

¹¹Significant at less than .01 using a chi-square test.

¹²This amount includes funds for the Special Services Program for Disadvantaged Students and State Grant Programs.

¹³This statement should be qualified in that the students may find other opportunities of equal or higher quality.

¹⁴Higher Education Research Institute, The Impact of Student Financial Aid Programs on Student Choice, Draft Final Report, 1978.

¹⁵Local and State studies are flawed because of insufficient followup and inability to control local economic fluctuations and mobility of graduates.

¹⁶A geographically related cluster is comprised of a team from a high school joined with teams from the elementary, middle, and/or junior high schools feeding into that high school.

Chapter III

**Recent Evaluation Results:
Highlights and Uses**

This chapter highlights important findings from recent evaluation studies and describes the specific uses of evaluation results. It outlines in broad perspective the use of results from ED evaluation studies. Detailed information is included in the individual program descriptions in volume II.

For each major study, the Office of Evaluation and Program Management prepares a 6- to 10-page Executive Summary which briefly describes the background, methodology, and findings of the study. Persons interested in greater detail about a study than can be presented in this chapter should call or write for a copy of the Executive Summary, as follows:

Ms. Yvonne Briscoe
Office of Evaluation and Program Management
Room 4070, Switzer Building
U.S. Department of Education
Washington, DC 20202
(202) 245-0361

Evaluations attest to program successes and failures, strengths and weaknesses, and thus provide the primary source of objective evidence used in determining future program operation and policy options. To be useful, however, evaluation and management study findings must be available when needed by Department officials for budgets, planning, and operational program decisions and by the Congress for appropriations and reauthorization decisions. As outlined in chapter 1, the Office of Evaluation and Program Management has concentrated on evaluation followup to promote findings that assist in important decisionmaking. Executive Summaries, staff briefings, the Program Resources Center, and Evaluation Implementation Boards are all mechanisms for incorporating evaluation findings into the decisionmaking process.

The program evaluation findings described in this chapter can be categorized in four areas, based on their use for policy officials and program managers: legislation; program effectiveness; program management; and program content.

Study of Evaluation Practices and Procedures (Legislation)

The recently completed "Study of Evaluation Practices and Procedures" by Boruch and Cordray of Northwestern University recommends that policymakers in both the executive and legislative branches take a variety of measures in mandating and conducting evaluations. In response to the "Holtzman mandate" in the Education Amendments of 1978 (Section 1526 of Public Law 95-561), the report recommends that the Congress:

- o Clarify statutory provisions for evaluation and participate in regular, joint planning for evaluations with the Department of Education.
- o Conduct a "capability assessment" of grantees' abilities before requiring new evaluation tasks.
- o Provide for pilot tests of new program variations in which high quality evaluation designs such as randomized studies can be used.
- o Encourage by law independent analysis and critique of evaluations.

- o Refer more often to evaluations used in deliberations so that uses of evaluations can more easily be tracked.
- o Refrain from incorporating specific evaluation guidelines into law.

Similar recommendations were made to the Department of Education. The report further advised Federal evaluators to consult with congressional offices more regularly, make evaluation reports more quickly and easily available, and include more systematic measurement of program implementation in evaluation reports.

Program Consolidation and the State Role of ESEA-Title IV (Legislation)

A recent study of the ESEA-Title IV consolidation effort indicated that most States and local school districts manage Parts B and C of Title IV independently, as they did for the categorical programs subsumed by Title IV. In Title IV, the Congress attempted to consolidate programs that under previous legislation and organization were not procedurally or substantively compatible. The absence of administrative consolidation at the Federal level apparently influenced States in their administrative decisions. A related lesson is that just as the Federal response must represent substantive change, so must a consolidated policy represent more than a shuffling together of categorical legislation. Furthermore, the Title IV legislation in the Education Amendments of 1978 contained no new language to suggest congressional commitment to a consolidated program effort, nor did it include incentives to encourage the institutional changes assumed by consolidation.

Validation of the Student Counts Used To Allocate Funds in Migrant Education (Program Management)

Information from a recently completed study of the 1977 counts used to allocate fiscal year 1979 funds for the Migrant Education Program indicated a 12 percent undercount of full-time equivalent (FTE) students enrolled in the Migrant Student Record Transfer System (MSRTS) during 1977. The major reason for the migrant children undercount appeared to be a failure by school districts to submit complete enrollment data to the MSRTS. Roughly 15 to 20 percent of the eligible migrant children enrolled in school during early 1978 were not enrolled in the MSRTS in 1977 and therefore did not accrue FTE credit. About 2 percent of the FTE's were generated by ineligible children; another 2 percent of the 1977 FTE's were generated by eligible children while they were out of the country. Overall, the 1977 counts (both for the Nation as a whole and for the geographic regions defined for the study) seemed to represent a conservative estimate of the total number of migrant children.

Evaluation of ESEA Title I Programs for the Neglected and Delinquent (Program Management)

The recently completed National Evaluation of State Programs for Institutionalized Neglected or Delinquent Youth under Title I of the Elementary and Secondary Education Act describes the program in terms of student need for services and actual benefits from participation in Title I. Overall, there is evidence of significant need but of irregular service delivery. In addition, there is scant evidence of positive change in either basic skills achievement or student self-perception.

On a positive note, special efforts to define characteristics of successful programs, as well as practices which impede student progress, resulted in information which local and State administrators can use to improve their programs. For example, a modest relationship was found between student exposure to basic skills instruction and achievement growth; yet over half of the class-time scheduled for basic skills instruction was actually used for noninstructional activities. Of this amount, more than half resulted from student absences often due to assignment by the institution to other activities. Only about 25 percent of the class time which was non-task-related could not be controlled by staff; the rest of the time went to activities such as smoking breaks, clean-up, tracking missing students, and casual conversations. Another practice to avoid was the misuse of audiovisual materials to free teachers from teaching.

In settings where teachers or aides provided instruction directly, reading gains were greater; the fewer students per teacher and the less time teachers and students spent in non-task-related conversations, the greater were math and reading gains.

Characteristics and Contexts of ESAA Basic Human Relations Programs (Program Content)

A recent study of ESAA-funded human relations programs reported an increase in the number of these programs over the last few years. The study also reported that:

- o Compared to all ESAA districts, those with human relations programs tended to be larger, more recently desegregated, and to have a lower percentage of minority students in the school population.
- o Two types of human relations services were offered to students: services focusing primarily on intergroup relations, problems, and understanding; and services focusing primarily on the special needs of minority students.
- o Programs with a special needs focus occurred in districts that desegregated early, while more recently desegregated districts were likely to have intergroup relations programs.
- o Human relations services were also offered to staff and parents. Staff services consisted primarily of inservice training sessions, and participation in advisory groups was the most common form of service to parents.

Later phases of this study will examine the effectiveness of these services and the characteristics of successful human relations programs.

ESEA, Title I Early Childhood Education (Program Content)

A recently released report of an ongoing study of early childhood compensatory education programs concluded that early childhood Title I programs, both within and across grades, have extremely diverse strategies and objectives. All the

general educational trends common in early childhood education are evident in Title I projects. The report also observed that:

- o Prekindergarten programs typically address a wide range of goals--cognitive, language, emotional, social, gross-motor, psychomotor, organizational, and motivational development.
- o The structure of kindergarten Title I programs depends on the availability of other projects within the school district.
- o Virtually all Title I first-grade programs are child-focused, school-based, and part of a multigrade-level program in reading, language arts, or mathematics.
- o Without standards or guidelines on how to conduct required evaluations of early childhood programs, districts use many methods of varying quality.
- o Methods to evaluate parent involvement and the consequences for their children need to be developed.

The findings of this report are being used to review alternative strategies for an evaluation system for early childhood Title I programs.

State Student Incentive Grant Program (Program Management/Content)

This study investigated issues concerning the relationship between State and Federal agencies in administering student financial aid, with emphasis on the State Student Incentive Grant (SSIG) Program. SSIG is a \$76.5 million per-year program designed to encourage States to develop or expand programs of grant assistance to needy undergraduate students. Currently, it is a 50-50 cost-sharing (State-Federal) program.

The States were found to be sharply divided in terms of the amount of funds provided for student aid. Sixteen States exactly match SSIG funds with State aid, while 13 States contribute more than 10 times the SSIG dollars received. Further, the needs analysis procedure used to determine student eligibility for aid, the average and maximum awards, and the administrative structure responsible for State grant programs, vary greatly from State to State.

The study also found that, at almost all institutions, the tuition refund policy is described in the school's admissions catalog. Twenty-five percent notify students of refund policies prior to registration, and another 25 percent give notification to students upon registration. The average interval between application for and receipt of a refund is 2½ weeks. Finally, 66 percent of the public institutions and 60 percent of the private institutions have established procedures for students to appeal unfavorable refund decisions.

Criteria for Recognition of Accrediting and State Approval Agencies (Program Management)

Recognition by the Secretary of Education of accrediting and State approval agencies is the principal means of establishing eligibility to participate in Federal student aid programs by postsecondary education institutions. An

evaluation of the criteria and procedures for recognition was recently completed. Highlights of the study findings are:

- o The ED procedures for recognition reliably differentiate ineffective agencies from effective ones, and these procedures are consistent over time in interpreting and applying the criteria.
- o The recognition decisions over the 10-year period from 1969 to 1978 have consistently utilized virtually all the established criteria.
- o Agencies denied recognition differ among themselves more widely than do the agencies recognized. The major deficiencies of the agencies denied recognition involve weak evaluative procedures, questions about the impartiality of their decisions, and nonrepresentative governing boards. Other deficiencies are limited staff, budget, and experience.
- o When presented descriptions of agencies that had been evaluated and either recognized or denied recognition by ED, a group of slightly more than 100 persons knowledgeable about accrediting agreed substantially with the ED's decisions. The measure of agreement between the actual decisions and the judges' decisions was .68, where 1.00 indicates perfect agreement. Agreement was nearly unanimous for agencies denied recognition. The major source of disagreement involved agencies recognized for a limited period, where judges tended to award recognition for a slightly longer period than actually took place.

A Guide To Measuring Achievement Level and Program Impact on Achievement in Projects (Program Management/Effectiveness)

One outcome of a study entitled "An Evaluation of Project Information Packages (PIP's) As Used for the Diffusion of Bilingual Projects" was the preparation of a prototype evaluation manual. This manual contains specific achievement-evaluation guides and worksheets which were developed for use in this study. The manual is intended for local bilingual education project directors and evaluators who must work together to plan and implement local evaluations. While it is not a complete guide to bilingual program evaluation, it focuses on two important questions:

- o What is the level of student performance relative to national norms or comparable groups?
- o What is the impact of the bilingual program on student achievement compared to results of other local instructional practices, past and present?

This unconventional guide to evaluating bilingual projects deals in-depth with selected problems that are either unresolved or widely overlooked in current evaluations, and it recommends solutions for evaluators at the local level.

Title I Technical Assistance Centers (Program Effectiveness)

The Technical Assistance Centers for Title I of the Elementary and Secondary Education Act provide evaluation technical assistance for Title I elementary and

secondary programs to State education agencies and, through the State agencies, to local education agencies. There are 10 Technical Assistance Centers (TAC's), one for each ED region. Many of the problems faced by the State and local education agencies across the country are the same (e.g., test selection, quality control, implementation of the Title I evaluation models, measuring whether gains are sustained, and use of the test and evaluation information).

To avoid duplication of effort, development of materials was coordinated across the TAC's. Thus, materials produced by one TAC are available to all other TAC's and to State and local agencies as well, and TAC's are required, whenever possible, to use existing material.

Bilingual Student Placement System (Program Management)

Developed under contract in 1980 by ED, the Student Placement System offers resources to assist bilingual education projects funded under Title VII of the Elementary and Secondary Education Act in the design and implementation of a system for: (1) selecting those students most in need of project participation; (2) deciding when a participating student may successfully be transferred to an English-language classroom; and (3) providing appropriate followup assistance to transferred students. In summer 1980, copies of the student placement system were distributed to all Title VII-funded bilingual education projects. In fall 1980, a series of training sessions was held to train staff of the Bilingual Education Service Centers and staff of Evaluation, Dissemination, and Assessment Centers and, subsequently, to train staff of local projects how to use the Student Placement System.

Program Management Procedures in Campus-Based and Basic Grant Programs (Program Management)

The rapid expansion of Federal student financial aid programs has put great strain on a management "system" that can at best be described as "varying." A recently completed study identified significant gaps that persist in the quality of management practices at the institutional level. Four management procedures, in particular, were identified as needing improved administration:

- o Clarifying and enhancing the role of the student financial aid office in the institutional hierarchy.
- o Developing and implementing a student financial aid information system, at both the precollege and college level.
- o Expanding financial aid counseling for special student populations.
- o Clarifying and refining the packaging of student financial aid.

In addition to identifying problems, the study discusses related issues in detail and offers recommendations to help improve institutional operations. The study does not attempt to duplicate existing manuals on the subject. It does, however, review existing publications on the subject for the reader. It also contains program impact information.

Impact of the Middle Income Student Assistance Act (Financial Aid)

A study of MISAA's impact showed that high proportions of dependent students from all family income levels were receiving aid, but that the proportionate increase was greater among those from families with incomes in excess of \$12,000. As a result, the percent of college costs met from work or loans for students with family incomes in excess of \$12,000 declined significantly, regardless of type of institution attended. Family contribution expectations also declined, according to a recent study of Federal student aid programs.

At the same time, little change in the relative distribution of need-based Federal student aid awards among 4-year institutions was observed. Two-year colleges gained as a group while proprietary institutions, which serve large numbers of low income students, showed a loss. All institutions reported increases in the average student award ranging from \$100 to \$300.

Also reported were the concerns of financial aid officers regarding regulations, administrative costs, timing of funding, and reporting requirements.

Upward Bound (Program Effectiveness)

A recent study of the Upward Bound (UB) program indicated that:

- o About 91 percent of the typical UB participants entered some type of postsecondary education while about 70 percent of comparable nonparticipants entered.
- o Of the students who entered postsecondary education, about 73 percent of typical UB participants attended a 4-year college or university. The comparable rate for nonparticipants was 50 percent. About 22 percent of the nonparticipants attended a vocational/technical school in comparison to 9 percent of the UB participants.
- o Typical UB participants received more financial aid to attend postsecondary education than comparable nonparticipants. The UB participants received twice as much grant/scholarship funding (i.e., \$1,428 vs. \$689 on average) as comparable nonparticipants. Typical UB participants also received larger loans (i.e., \$393 vs. \$300) than comparable nonparticipants.
- o Overall, UB had a large positive effect on student persistence. Across all types of schools, typical UB participants maintain their enrollment about one term longer than comparable nonparticipants. After the type of school attended is taken into account, UB participants persist slightly longer (i.e., one-fifth of a term) than comparable nonparticipants.
- o The grades earned at postsecondary institutions by UB participants were roughly the same, or slightly lower, than those earned by comparable nonparticipants. At 4-year colleges and universities, average UB participants and comparable nonparticipants earned grade-point averages of about 2.0 (equivalent to a "C").

Financial Indebtedness and Postsecondary Education (Program Content)

Preliminary findings from a study of student indebtedness indicate that the median student debt at the baccalaureate level increases from \$3,000 to \$10,000 for students attending graduate school. Highest as a group were medical students who entered with a median loan amount of \$5,000 and saw it grow to \$15,000, while at the low end of the scale the median indebtedness of education majors grew to \$3,000 from a base of \$2,000. The study also compares expected earnings, by discipline, with the level of student indebtedness.

Sex Equity in Vocational Education Programs (Program Effectiveness)

This study was mandated by the Congress to determine to what extent sex discrimination and stereotyping in vocational programs had been reduced or eliminated. Findings indicate that overt discrimination, such as rules denying admission on the basis of sex, has been reduced. However, many practices still discourage students from entering nontraditional fields before they are enrolled and further discourage them once they are enrolled. Despite societal factors outside the school which exert powerful influences on the aspirations of youth, study findings indicate that the school can have an impact because of the strong positive correlation between the school's level of equity activity and its proportion of nontraditional enrollment. However, little action was evident at the school level to foster equity --particularly student-oriented activity.

Few States or schools were engaged in community and employer activities. Yet these activities -- particularly with employers -- seem to be a critical ingredient in any successful effort to promote sex equity. There is also evidence that efforts to achieve equity in staffing patterns have a positive effect. Those schools with higher "internal affirmative action" indexes also had higher proportions of nontraditional teachers.

National Study of Vocational Education System and Facilities (Program Content)

A comprehensive study of the vocational education systems in each of the States and Territories has provided the first thorough description of State governance structures, delivery systems, and funding arrangements. Prior to this study, heterogeneity among the States was known to be characteristic of vocational education; the study documents these differences. During the course of the study, information gaps recognized at the outset were found to be even greater than anticipated.

The report deals with the organization, governance, and financing of the State systems; the organization at the local levels within each State; and State financial policies as they relate to vocational education facilities, equipment, and program operations. The number, characteristics, and utilization of the several types of vocational educational institutions are also assessed for the first time.

The general characteristics of 6,660 institutions (5,560 secondary and 1,100 postsecondary) are described. Among these characteristics are the number and geographical distribution of the institutions, shops, and laboratories; types of construction of facilities; reported condition of facilities; and accessibility to handicapped persons.

Other findings show that:

- o The greatest concentration of vocational education facilities (shops and laboratory spaces) is in communities of 25,000 - 100,000 population.
- o In 1965, 40 States financed construction projects with Federal vocational education funds; in 1975, only 21 States used these funds.
- o The proportion of vocational education facilities reported as totally inaccessible to the handicapped is greatest among vocational high schools: over 30 percent are inaccessible, compared to lesser rates at other other types of vocational education institutions.

Assessment of State Plans for Career Education (Program Management)

A recently completed study has provided 49 States and Territories with evaluations of their State plans for implementing career education. Initial support for developing these plans was provided during fiscal years 1976 and 1977. The study, which started in September 1978, identified 10 elements of a model State plan. Criteria were developed so that each element of a plan could be rated on a three-point scale as being "strong," "adequate," or "weak." An overall rating was then calculated on a five-point scale.

The 49 States and Territories which submitted plans before May 1979 were given preliminary ratings of their plans. In these ratings, 23 (47 percent) received an overall rating of 3.0 or higher. In response, over half of the sites (57 percent) voluntarily provided revisions and/or additions to remedy reported weaknesses. Final ratings were then sent to all States. This time, 30 (62 percent) were rated 3.0 ("adequate") or better. Seven of the plans were rated "strong" and only three were considered "weak."

The States and Territories also received a guide to help them adapt their plans to meet the requirements of P.L. 95-507, the new Career Education Incentive Act. This guide together with the assessment under the old law enabled States to incorporate the information gained from the individual evaluations of their plans into the new 5-year plan required by the Career Education Incentive Act. These plans form the basis for funding in fiscal year 1980 and beyond.

A Study of Library Cooperatives, Networks, and Demonstration Projects (Program Effectiveness)

A study of the Library Research and Demonstration Program and the Interlibrary Cooperation Program found that both programs were making significant contributions to the improvement of libraries.

The Research and Demonstration Program has provided millions of dollars for innovative research and demonstration, where either very few or no other funds were available. Local projects often focused on providing library service to minorities and on the utilization of new technologies.

The Interlibrary Cooperation Program is responsible in part for the development of multilibrary cooperation and networking, especially at State and regional levels. It was also found to be a major influence toward modifying or passing State legislation that favored cooperation and networking.

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This chapter has presented highlights from study findings. Volume II will discuss these findings in greater detail, along with program-specific information. Volume II describes each program's legislative funding history, objectives, operations, and evaluation findings.

A program's funding history in volume II will consist of annual authorizations and subsequent appropriations; program goals and objectives state the broad congressional intent in establishing each education program. The program operations sections in volume II will discuss how programs actually have been implemented and describe the scope of current activities. The evaluation findings will focus on program effectiveness and progress toward achieving long-range program goals.

In subsequent years, volume II will report on program changes in detail. Volume I, on the other hand, will continue to cover the evaluation role of the Department of Education from a broader perspective. Significant changes in the evaluation mission will be explained along with any new analytic approaches adopted or established techniques that may be de-emphasized.

